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Overall progress achieved since the United Nations Conference on Environment and Development

Report of the Secretary-General

Addendum

Science for sustainable development*

(Chapter 35 of Agenda 21)

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* The present report was prepared by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as task manager for chapter 35 of Agenda 21, in accordance with arrangements agreed to by the Inter-Agency Committee on Sustainable Development (IACSD). It is the result of consultation and information exchange between United Nations agencies, international and national organizations, interested government agencies and a range of other institutions, individuals and major group representatives.

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INTRODUCTION

1. The present report reviews progress made in the implementation of the objectives set out in chapter 35 of Agenda 21 (Science for sustainable development)[1] taking into account the decisions taken by the Commission on Sustainable Development on this subject in 1995 at its third session.

2. It is no exaggeration to assert that without science, there can be no sustainable development. For many of today's major environment and development concerns, the sciences (including the social and human sciences) are essential in detecting and analysing the problem, in identifying solutions and in ensuring scientifically sound action. This has been particularly evident for the ozone depletion issue, and increasingly also for other issues such as climate change, erosion of biological diversity and water and coastal pollution. In fact, the role of science is evident in all advances that have been made towards sustainable development. In this vein, a critical mass of scientists and engineers is needed in developing and developed countries alike for the development, adaptation and use of environmentally sound technologies and land and water management systems. Science is the basis for sustainable agricultural and industrial development, as well as for meeting the world's increasing energy demand.

3. While there has been an increased recognition of the importance of science and a considerable increase in international planning and coordination to provide the scientific basis for sustainable development, the actual amount of money being spent on scientific activities in a majority of both developing and developed countries has declined since 1992. More generally, in most countries investment in research and development (R and D) is stagnating or even diminishing. The same is true as regards financial support for international scientific cooperation programmes. Many developing countries, in particular the least developed ones, still lack adequate scientific capacity, including a critical mass of qualified scientists in relevant disciplines including engineers. Scientific illiteracy remains a major impediment in developed and developing countries alike for a better understanding of environment and sustainable development problems and for ensuring a full participation of the public at large in finding and supporting solutions to these problems.

I. KEY OBJECTIVES

4. Guided by the priorities identified in chapter 35 of Agenda 21, and the decisions of the Commission on Sustainable Development at its third session,[2] four key objectives in the field of science for sustainable development need to be addressed:

(a) To strengthen capacity and capability in science for sustainable development, with particular emphasis on the needs of developing countries;

(b) To improve scientific knowledge for the prudent management of environment-development interactions in order to provide for both the daily

needs and the future development of humanity. This objective includes reducing scientific uncertainties and improving long-term predictive capacity;

(c) To foster international scientific cooperation and the transfer and sharing of scientific knowledge;

(d) To bridge the gap between science, the productive sectors, decision makers and major groups in order to broaden and strengthen the application of science.

II. REPORTING ON AND ANALYSING SUCCESS

A. Growing international recognition of the role of science in sustainable development

5. The essential role of science in sustainable development has been given wide recognition in the initial implementation of (a) many chapters of Agenda 21, in particular chapters 9 through 22, grouped under the title "Conservation and management of resources for development"; (b) the United Nations Framework Convention on Climate Change,[3] the Convention on Biological Diversity[4] and the United Nations Convention to Combat Desertification in those Countries experiencing Serious Drought and/or Desertification, particularly in Africa;[5] and (c) the action plans adopted at other major global conferences: Barbados (Programme of Action for the Sustainable Development of Small Island Developing States[6]), Cairo (Programme of Action of the International Conference on Population and Development[7]), Yokohama (Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation, containing the Principles, the Strategy and the Plan of Action[8]), Istanbul (Habitat Agenda[9]) and so on.

6. To take an example, the United Nations Conference on the Sustainable Development of Small Island Developing States (Barbados, April-May 1994) recognized the important role of science and technology in its Programme of Action[6] by including a separate chapter (chapter XIII) on this issue. Moreover, within the topical chapters on such subject areas as climate change and sea-level rise, natural and environmental disasters, management of wastes, and so forth, the need for a strong scientific basis was highlighted.

7. Scientific advisory bodies have been established in support of all of the major environmental conventions listed above. Similarly, the Global Environment Facility has recently reconstituted its Scientific and Technical Advisory Panel. These bodies are essential for providing a sound scientific basis for the future "implementation" of sustainable development in the areas of the conventions and for further bridging the gap between science and decision-making.

B. Major scientific cooperation programmes are in place

8. A significant accomplishment of the post-United Nations Conference on Environment and Development period has been the consolidation and setting into place of major international scientific programmes addressing several critical

environment and sustainable development issues. A number of these programmes are jointly sponsored by several of the United Nations agencies concerned, as well as by the International Council of Scientific Unions (ICSU), its member unions and its vast network of scientific activities.

9. The World Climate Programme (WCP), for which the World Meteorological Organization (WMO) plays an overall coordinating role, provides an example of enhanced inter-agency cooperation and, to some extent, integration of activities by a number of United Nations agencies and ICSU. In 1993, a special intergovernmental meeting on the "Climate Agenda" was held to determine the WCP response to the United Nations Conference on Environment and Development. As requested by Governments at this meeting, the sponsors of the WCP (WMO, the United Nations Environment Programme (UNEP), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and its Intergovernmental Oceanographic Commission (IOC), the Food and Agriculture Organization of the United Nations (FAO) and ICSU) have jointly prepared the Climate Agenda, an integrated framework of international climate-related programmes. The Climate Agenda has been endorsed by the governing bodies of all sponsoring organizations.

10. The relevant organizations, based on decisions of their governing bodies, have also started to develop the scientific foundations for comprehensive global observation systems for the major components of the Earth system: the Global Climate Observing System (GCOS) sponsored by WMO, UNEP, IOC and ICSU; the Global Ocean Observing System (GOOS) sponsored by IOC, WMO, UNEP and ICSU; and the Global Terrestrial Observing System (GTOS) sponsored by FAO, UNESCO, UNEP, WMO and ICSU. Cooperation between the three systems is promoted through a joint Sponsors Group.

11. Also in the area of biodiversity science, a new international cooperation programme has been put into place. Diversitas, a joint programme of UNESCO and ICSU and various bodies of the ICSU family, is addressing key issues identified in chapter 15 of Agenda 21 and the Convention on Biological Diversity.

12. Progress has been made in enhancing collaboration among the natural and socio-economic sciences at national, regional and international levels. Launched by the International Social Science Council (ISSC), the International Human Dimensions of Global Environmental Change Programme (IHDP) has now been joined by ICSU, and this change further strengthens its interdisciplinarity. UNESCO has launched an international scientific cooperation programme in the social and human sciences entitled "Management of Social Transformations" (MOST) whose aim is to enhance the use of social science research in formulating sustainable human development policies.

13. Within the individual agencies and organizations of the United Nations system, including the World Bank, scientific programmes and activities have undergone significant revision and reorientation in order to respond to chapter 35 of Agenda 21 and the conventions. Building upon a long tradition of fostering sustainable development in developing countries, this renewal of priorities and mechanisms has reinforced "research and development" action in sectors such as food, agriculture, fisheries and forestry (FAO), industry (the United Nations Industrial Development Organization (UNIDO)), health and

sanitation (the World Health Organization (WHO)), agrometeorology and operational hydrology, and weather and climate forecasting and services (WMO), as well as broader scientific inquiry in the basic, engineering, social and environmental sciences (UNESCO, United Nations University (UNU)). The Intergovernmental Oceanographic Commission, the International Hydrological Programme (IHP) and the Man and the Biosphere Programme of UNESCO have reoriented their activities in response to the specific chapters in Agenda 21 addressing oceans, freshwater and land resources. All relevant United Nations organizations have enhanced their programmes aimed at strengthening national scientific capacities in developing countries, generally with particular attention to Africa south of the Sahara. In the same vein, the regional commissions have also developed their programmes that focus on strengthening science as related to sustainable development in developing countries. Furthermore, ICSU has mounted a programme dedicated to strengthening scientific capacities in developing countries related to global change research, and a programme on capacity-building in science.

C. Establishment of scientific assessments as a basis for decision-making

14. The use of scientific assessments of specific environmental problems and their implications for development continues to gain widespread acceptance as a vital support for policy- and decision-making. Through the assessment process, the global scientific community is mobilized to establish the current peer-reviewed scientific knowledge on a specific issue so as to identify major gaps in scientific understanding and to carry out strategic programming of further scientific research.

15. The value of scientific assessments had already been demonstrated prior to the United Nations Conference on Environment and Development, as was evidenced by their input into the formulation of the Vienna Convention for the Protection of the Ozone Layer, its Montreal Protocol on Substances that Deplete the Ozone Layer and subsequent amendments. At the international level, one of the main ongoing scientific assessment programmes is that of the Intergovernmental Panel on Climate Change (IPCC) sponsored by WMO and UNEP. IPCC has proven to be a valuable tool for Governments. Based on its scientific assessments, IPCC has proposed various response strategies to counter the potential impacts of climate change. As IPCC interfaces efficiently with the international scientific community, its framework could serve as a model for similar assessment panels on environment and development. Other international assessments that were completed after the United Nations Conference on Environment and Development include the Global Biodiversity Assessment coordinated by UNEP, to which some 1,500 scientists contributed, and FAO's Report on the State of the World's Plant Genetic Resources for Food and Agriculture based on information provided in 154 country reports. The scientific community also conducted assessments of greenhouse gases (WMO/GAW), global water resources (Administrative Committee on Coordination (ACC) Subcommittee on Freshwater Resources) and the pollution of marine and coastal environments from land-based activities (Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection-Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP)).

16. Progress has also been made in important scientific and methodological work on the development of indicators for sustainable development. Scientists have addressed the problems inherent in indicator design. It is noteworthy that an effective dialogue has now been established between the scientists working on indicators, and the policy makers who will need to use them, particularly within the context of the Commission on Sustainable Development (see also the report of the Secretary-General on chapter 40 of Agenda 21 (E/CN.17/1997/2/Add.30)).

D. Scientific cooperation for capacity-building in developing countries

17. A number of important initiatives have been launched to develop high-level scientific capacities in developing countries (with particular reference to the least developed countries) so as to enable these countries to address local problems and to participate fully in regional and international activities related to important issues such as sustainable water and coastal zone management, global change and the conservation and sustainable utilization of biodiversity. Scientific capacities were a_ o enhanced through the upgrading of electronic communications capability and the renewal and sharing of data information systems. North-South and South-South networking of scientists and institutions of excellence contributed key elements of these activities. International organizations that supported these initiatives included UNESCO, FAO, the Third World Academy of Sciences (TWAS) and the Third World Network of Scientific Organizations (TWNSO) as well as the Global Change System for Analysis, Research and Training (START) of ICSU. The intergovernmental Commission on Science and Technology for Development set up by the Economic and Social Council provides another international expert forum for advice in this area, with the secretariat being provided by United Nations Conference on Trade and Development (UNCTAD).

18. Scientific cooperation is also being fostered at the national and regional levels by academies of science that are developing a growing number of activities that address the scientific underpinnings of Agenda 21 chapters. National academies of science in developed countries are supporting science activities in developing countries and, in this manner, strengthening vital links between the scientific communities of North and South. Scientific capacity-building in developing countries is also supported through projects financed by a number of development cooperation agencies of developed countries.

III. PROMISING CHANGES

19. Improved cooperation and coordination has been established both among scientific programmes of relevant United Nations system organizations (for example, UNESCO WMO, UNEP, FAO, UNIDO, WHO, the International Atomic Energy Agency (IAEA) and the International Maritime Organization (IMO)), and between them and major non-governmental scientific organizations, notably ICSU, ISSC, the International Council for Engineering and Technology (ICET) and their member unions, the Third World Academy of Sciences, and so on.

20. Modern information and communication technologies hold the promise of bridging the information gap between North and South. Through the Internet, scientists and engineers around the globe can now interact instantly with their colleagues so as to communicate their latest findings. Researchers in the South will increasingly gain access to global databases and interact more effectively among themselves and with colleagues in the North, thereby ending long years of isolation and separation.

21. Efforts to strengthen strategic links among the agricultural, environmental, basic and engineering sciences are gradually making progress. The World Bank is supporting a project that identifies 20 centres of excellence in various regions of the South, in order to promote capacity-building in science and technology according to the priorities of each region and with the commitment of local Governments. Each regional or international centre is expected to encompass a network of national centres aimed at training scientists and promoting research and development. The regional centres will be part of a global network. The backbone of the international network will be the international agricultural research centres of the Consultative Group on International Agricultural Research (CGIAR) (co-sponsored by the World Bank, FAO, UNDP and UNEP). Other intergovernmental organizations with major science programmes, such as UNESCO, UNIDO and WMO, would also be invited to participate, as well as major scientific non-governmental organizations (for example, the Third World Academy of Sciences).

22. At the regional level, promising events included ministerial-level meetings on science and technology such as the Hemispheric Meeting of Ministers Responsible for Science and Technology which was held in Cartagena, Colombia, in March 1996. Having the overall aim of strengthening cooperation in science and technology, the Declaration of Principles and Plan of Action adopted by the Meeting constitute a detailed agenda for addressing regional needs in scientific capacity-building, social development, links with the productive sector, environmental conservation and the use of new information technology. Similar ministerial-level meetings were held in other regions, notably Africa and Asia and the Pacific.

23. "Science" is included as an important stakeholder in national institutional set-ups for promoting sustainable development. In a number of countries, scientists have been incorporated into national coordination mechanisms (national commissions/national councils for sustainable development) in their personal capacities or as ex officio representatives of national scientific institutions.

IV. UNFULFILLED EXPECTATIONS

24. While there has been growing international recognition of the role of the sciences in sustainable development, there has not been an equivalent increased support at the national level. The information available from countries, including that submitted by national Governments to the Commission on Sustainable Development, indicates that very few countries have taken specific measures in direct response to chapter 35 of Agenda 21. In many countries, there is still a lack of clearly defined national strategies, policies and plans

for the purpose of ensuring the development of scientific capacity for the benefit of sustainable development, the management of science, the integration of science in national development plans and national participation in high-priority international scientific endeavours. In fact in most countries, investment in R and D is stagnating or even diminishing. While budget shortages explain this major shortcoming to some extent, it is also clear that many Governments accord low priority to investment in science and national scientific capacity-building. This runs counter to all evidence that there is a relation between investments in science and education and the growth of gross national product (GNP) in several countries showing rapid economic growth.

25. Many developing countries, in particular the least developed ones, still lack adequate scientific capacity, including a critical mass of qualified scientists in relevant disciplines. Weak technological infrastructures, a severe shortage of qualified human resources and limited financial means explain in part the persistent nature of the problem confronting many developing countries. This is where national priority-setting and international scientific cooperation are most sorely needed. Without genuine political will on the part of the international community, expressed in the form of cooperative arrangements, through, for example, the United Nations system and its various organizations, these most basic gaps will persist, seriously compromising efforts to move towards sustainable development.

26. Scientific illiteracy remains a major impediment (even in many industrialized countries) to bringing about a fuller appreciation of the complex issues of environment and development. To achieve a satisfactory way of life in the modern world and to participate actively in the pursuit of sustainable development, literacy in science, understood as an everyday working knowledge of the subject, has become as necessary as reading and writing (constituting literacy in the commonly understood sense).

27. Another very unsettling development is the fact that financial support for international scientific cooperation programmes is stagnating or, in some cases, even diminishing. The financing of international scientific programmes such as the World Climate Research Programme (WMO, IOC of UNESCO and ICSU) is provided primarily by national Governments. Quite naturally, Governments give priority to the financing of national activities feeding into these internationally mandated and coordinated programmes. As a result, it is often difficult to raise funds for the international coordination efforts within each programme and for true international cooperative activities, in particular those supporting developing-country participation in these activities. Governments should realize that internationally coordinated scientific programmes need to have sufficient international "core funding" in order to work efficiently as true programmes.

V. EMERGING PRIORITIES

28. Strong and concerted international support to build up the scientific community and scientific infrastructures in developing countries, and in particular in least developed countries, is an urgent requirement. Without an endogenous scientific capacity and infrastructure, development is impeded. As

the global nature of environmental issues is increasingly recognized and as government awareness of the interlinkages between development and environment grows, it becomes equally apparent that scientific capacity must be reinforced in all parts of the world and in a broad range of disciplines. Each country must possess the scientific capability to be an active and independent participant in "environment and development", and to master its own understanding of trends, potentials and threats inherent in change on a global scale. In the majority of developing countries today, however, scientific capacity falls far short of this objective.

29. To enhance scientific knowledge and increase scientific capacity with respect to the priority issues identified by the Commission on Sustainable Development (changing consumption and production patterns, energy (including renewable forms), transport, urban issues, enterprise, freshwater, management of risks), Governments, the scientific community and funding organizations should devote special attention to scientific activities relating to these fields. In the field of renewable energy, there is a need for enhanced research and capacity-building, including through the implementation of the relevant components of the World Solar Programme launched by the World Solar Summit at Harare in September 1996.

30. Scientific assessments have proved to be effective mechanisms for assuring quality scientific inputs to decision-making processes on a wide variety of environmental issues. Strong support should be provided for optimal utilization of existing assessment mechanisms and, where appropriate, additional such processes should be set into place. The science of assessment should be further developed in order to provide a sound scientific basis for encompassing an increasingly broad array of factors not only from the biophysical domain, but also from that of socio-economics. Enhancement of predictive capacity through modelling and scenario development is yet another priority area for science. The participation of experts from developing countries, which requires particular financial report, should be increased.

31. Worldwide accessibility to scientific information should be regarded as the birthright of all of the world's citizens and, in particular, should be readily available to scientists in all countries. New information systems and communication technologies hold the promise of offering rapid and worldwide access to scientific resources, but it will be a major challenge to convert this promise into reality. The investment in telecommunication systems and networking services that is required to provide open access to these electronic networks is currently well beyond the reach of some developing countries, particularly the least developed countries. Immediate and concerted action is needed in those cases to prevent the widening of the already substantial information and communication gap with respect to the more advanced countries.

32. Science education, in the larger sense of the term, should be reinforced in all school curricula and at all levels of society. There persists a widespread tendency to see science as the preserve of an intellectual elite, as an acquisition accessible only after years of study. Yet thinking in terms of cause and effect, process and innovation has widespread application to problems of development and sustainability for all members of society. The intellectual tools and approaches of science should be made accessible in all countries, and

to all levels of the population, in order to allow all persons to be active participants in finding solutions to environmental problems and defining appropriate forms of sustainable development. Activities aimed at strengthening science education at national and international levels are ipso facto related to the broader issue of education, awareness-raising and training for sustainable development (see report of the Secretary-General on chapter 36 of Agenda 21 (E/CN.17/1997/2/Add.26)) and should be developed through close cooperation between scientific and educational institutions and departments.

33. Along similar lines, efforts should be continued to promote recognition of the validity and utility of traditional or local knowledge of the natural environment. These vernacular systems of environmental knowledge constitute parallel bodies of knowledge and know-how which can complement scientific knowledge and technology. As they are already an integral part of the socio-economic and cultural lives of communities, they provide a grass-roots base for conservation and sustainable development action which can be accessed through participatory research methods.

34. As regards the lack of funds allocated to science and science education, appropriate measures must be taken to increase investment in R and D at the national level, with a focus on science for sustainable development, in developing countries and developed countries alike. Support to developing countries, in particular least developing countries, to strengthen their scientific infrastructure and capacities, is one of the highest priorities facing society today. Multilateral and bilateral donor agencies and Governments, as well as specific funding mechanisms, such as the Global Environment Facility, in relation to the four core areas, should step up significantly their support to developing countries in this regard. Special attention should also be paid to providing sufficient "core-funding" to the secretariats of recognized international scientific cooperation programmes in key areas of environment and sustainable development.

35. Some other issues that will require increased research activities in the future are related to (a) the pathways of man-made chemicals, in particular toxic chemicals, in ecosystems, agro-ecosystems and the global biosphere and the possible undesirable biological effects in humans and animals subsisting often far away from the source point; and (b) interdisciplinary research on re-emerging tropical and subtropical diseases conditioned by particular environments and vectors.

Notes

[1] Report of the United Nations Conference on Environment and Development, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

[2] See Official Records of the Economic and Social Council, 1995, Supplement No. 12 (E/1995/32), chap. I, sect. C.2, para. 152.

[3] A/AC.237/18 (Part II)/Add.1 and Corr.1, annex I.

[4] See United Nations Environment Programme, Convention on Biological Diversity (Environmental Law and Institutions Programme Activity Centre), June 1992.

[5] A/49/84/Add.2, annex, appendix II.

[6] Report of the Global Conference on the Sustainable Development of Small Island Developing States, Bridgetown, Barbados, 25 April-6 May 1994 (United Nations publication, Sales No. E.94.I.18 and corrigenda), chap. I, resolution 1, annex II.

[7] Report of the International Conference on Population and Development, Cairo, 5-13 September 1994 (United Nations publication, Sales No. E.95.XIII.18), chap. I, resolution 1, annex I.

[8] Report of the World Conference on Natural Disaster Reduction, Yokohama, 23-27 May 1994 (A/CONF.172/9), chap. I, resolution 1, annex I.

[9] Report of the United Nations Conference on Human Settlements (Habitat II), Istanbul, 3-14 June 1996 (A/CONF.165/14), chap. I, resolution 1, annex II.

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Report of the Secretary-General

Addendum

Promoting education, public awareness and training*

(Chapter 36 of Agenda 21)

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INTRODUCTION

1. The present report reviews progress made in the implementation of chapter 36 of Agenda 21 (Promoting education, public awareness and training),1/ taking into account the decisions taken by the Commission on Sustainable Development on this subject in 1996 at its fourth session.

2. Chapter 36 is a cross-sectoral chapter of Agenda 21. Since 1992, this chapter has continued to enjoy unanimous support from Governments, major groups and the educational community of both developed and developing countries, as it had in Rio. Education is considered indispensable for sustainable development and for increasing the capacity of people to address environment and development issues. The implementation of chapter 36 is therefore seen to influence progress in the implementation of all the other chapters of Agenda 21.

3. Recommendations concerning education also appear in each of the action plans of the major United Nations conferences held after the United Nations Conference on Environment and Development as well as in the three conventions (on biodiversity, climate change and desertification). For this reason, education can be seen as the cornerstone of sustainable development in all its dimensions. Science education can be considered to be a major component of environmental education and education for sustainable development. Further reference to the importance of enhancing science education is to be found in the report of the Secretary-General on chapter 35 of Agenda 21 (Science for sustainable development) (E/CN.17/1997/2/Add.25).

I. KEY OBJECTIVES

4. Guided by the priorities and programme areas identified in chapter 36 of Agenda 21, and reconfirmed by the Commission on Sustainable Development at its fourth session in 1996, three main objectives need to be addressed:

(a) To reorient education towards sustainable development through reform of education as a whole rather than through adjustment or adding on of separate new components to existing curricula;

(b) To increase public awareness as public support and action are increasingly seen as the key to change;

(c) To promote training in order to ensure the necessary competence and human resources for planning and implementing sustainable development in sectors of human activity.

5. The last objective, training, is dealt with in this report only in so far as it concerns action in regard to the first two objectives. The wider issue of higher education is addressed in the report of the Secretary-General on chapter 35. Other areas of training are dealt with in the report on chapter 37 (E/CN.17/1997/2/Add.27) as well as in all reports concerning the implementation of the different topical chapters of Agenda 21.

II. REPORTING AND ANALYSING SUCCESSES

6. The five years since the United Nations Conference on Environment and Development have witnessed significant progress in each of the broad programme areas of chapter 36. The rapid expansion of access to communication technologies, the development of new technologies, the increasing impact of the mass media, globalization and the evolution of the "information society" have all impacted on the concerns of chapter 36. Progress has also been made in basic education, which remains a priority for many countries of the world, linked to the overall effort to combat poverty.

7. While many individual examples could be cited, emphasis is placed in this report on the single most important success since the United Nations Conference on Environment and Development: the decision by the Commission on Sustainable Development at its fourth session to initiate a special work programme on chapter 36.2/ This decision has served to:

(a) Raise visibility on a subject that, while recognized as essential by all, is often overlooked for lack of controversy or funding;

(b) Demonstrate that Governments understand that education is a fundamental priority and one needing special impetus in the United Nations Conference on Environment and Development follow-up;

(c) Clarify the strategic priorities for action in the vast scope of the chapter;

(d) Galvanize the key actors within a common framework for priority action.

8. An inter-sessional workshop on the theme "Education and public awareness for sustainable development" (Prague, November/December 1995), organized by the Czech Republic in cooperation with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Department for Policy Coordination and Sustainable Development of the United Nations Secretariat, provided key input into the development of this work programme.

9. The vision of education inscribed in chapter 36 has been reaffirmed, broadened and deepened within the new international consensus and framework for action emerging from the series of international conferences organized by the United Nations after the United Nations Conference on Environment and Development. Explicit recommendations concerning "education, public awareness and training" appear in the action plans for each of the conferences, as well as in the Cor ention on Biological Diversity,3/ the United Nations Framework Convention on Climate Change4/ and the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa.5/ An important development since the United Nations Conference on Environment and Development has been, therefore, the consistent importance given to education and the concomitant need to integrate the implementation of chapter 36 with the implementation of analogous recommendations within the other action frameworks. This integrated approach was emphasized by the Commission on Sustainable Development at its fourth session during its review of chapter 36 and is reflected in the work programme.

10. Within the United Nations system, the integrated follow-up to the major conferences is being pursued in part through the convening under the Administrative Committee on Coordination (ACC) of three inter-agency task forces. Of particular relevance to chapter 36 is the inter-agency Task Force on Basic Social Services for All, within which there is a working group on basic education chaired by UNESCO. The work of this task force will culminate in the identification of indicators, in order to facilitate integration at national level in both thematic and operational terms, as well as new guidelines for United Nations resident coordinators to ensure improved help from the United Nations system in this respect.

11. Since the United Nations Conference on Environment and Development, a number of events and studies have taken place that provide an overview and evaluation of the status of environmental and development education. Particular attention is drawn to the International Commission on Education for the Twenty-first Century, chaired by Jacques Delors and established by UNESCO. In its report on education for the twenty-first century,6/ submitted to the General Conference of UNESCO in 1995, the Commission formulated recommendations for enhancing and reviewing education, as well as for reform of the formal education system. The work of the International Commission incorporated education for sustainable development and therefore provided the broad context for implementation of chapter 36.

12. At national level, a number of countries have included education, public awareness and training in national strategies or plans for sustainable development. During this planning process, interested parties and potential actors from different sectors of society have been mobilized. Certain countries are now moving towards reviewing school curricula or otherwise taking concrete action. In many countries, the development of education for sustainable development coincides with overall reform of formal educational systems.

13. National policies and strategies have been spurred by regional meetings including some organized by the World Conservation Union (IUCN) and UNESCO and agreements at intergovernmental or expert level which have reiterated the importance of, and recommended action concerning, education for sustainable development. Those meetings include:

(a) The Seventh Conference of Ministers of Education of Latin America and the Caribbean, Kingston, Jamaica, 13-17 May 1996;

(b) The Mid-decade Meeting of the International Consultative Forum on Education for All, Amman, 16-19 June 1996;

(c) The International Conference on Education, forty-fifth session, Geneva, 30 September-5 October 1996;

(d) The Summit of the Americas on Sustainable Development, Santa Cruz de la Sierra, Bolivia, December 1996;

(e) Preparations for the Fifth International Conference on Adult Education (CONFINTEA V), Hamburg, 14-18 July 1997.

III. PROMISING CHANGES

14. Since the United Nations Conference on Environment and Development, there has been a significant evolution - both conceptual and operational - with regard to education, public awareness and training, which are increasingly being called "education for sustainable development".

15. Since 1992, the process of rethinking education and public awareness has accelerated, spurred by other major United Nations conferences on sustainable development, and by the experience acquired by Governments, business and industry as they begin to further changes towards sustainability. Experience since Rio has reinforced the conviction that sustainable development cannot be achieved without public understanding, support and action. Education is understood, more than ever, as necessary to support advances in nearly all sectors, including production, technology, population, advancement of women, management of human settlements, health, peace and security. The view that chapter 36 is relevant to the implementation of all other chapters of Agenda 21 is thus even stronger today than it was in 1992.

16. In this new vision, education is seen no longer as an end in itself, but as a means to:

(a) Effect the changes in values, behaviour and lifestyles that are needed to achieve sustainable development, and ultimately democracy, human security and peace;

(b) Disseminate the knowledge, know-how and skills that are needed to bring about sustainable production and consumption patterns and to improve the management of natural resources, agriculture, energy and industrial production;

(c) Ensure an informed public that is prepared to support changes towards sustainability emerging from different sectors.

17. The implications of this new vision of education for formal education systems are major, and coincide with a broad rethinking within many countries of formal education systems that are no longer considered adequate to meeting the needs of society and the workplace. Traditionally, education has been designed largely to pass on existing knowledge, skills and values. Today, education is being redesigned in terms of how to prepare people for life: for job security; for the demands of a rapidly changing society; for technological changes that now directly or indirectly affect every part of life; and, ultimately, for the quest for happiness, well-being and quality of life. Education is being redefined as a lifelong process that needs to be not merely readjusted but restructured and reformed according to new requirements. One of the requirements for the future is that of sustainability, an overarching concept that has broad implications for curricula at all levels of education.

18. Much progress is being made, particularly within the last year, in clarifying the concept and key messages of the still emerging notion of "education for sustainable development", not least of which is the recognition that there is an urgent need to develop a new conceptual framework for action.

19. Within the new work programme on chapter 36, the Commission on Sustainable Development has asked that the concept and key messages be clarified. To this end, UNESCO, as task manager, has begun a process of consultation with educators, during which the initial concept is being tested and refined with the professional community. At the annual meeting of the North American Association for Environmental Education (San Francisco, November 1996), professionals from over 50 countries were engaged in this dialogue. Similarly, at the Second Scientific Forum on Environment of the Association of Universities Group Montevideo (AUGM), specialists from 27 universities in Latin America were consulted. Analogous events will take place in 1997 in the Asian region, as well as in Europe. UNESCO is also working towards the organization in 1997 of an international meeting on education for sustainable development to be held possibly in Greece, 20 years after the landmark Tbilisi conference which set the basic guidelines for the development of environmental education. The meeting in Greece should be an important step in building consensus on the concept and key messages of education for sustainable development.

20. Within UNESCO, new arrangements were set in place immediately after the United Nations Conference on Environment and Development and in anticipation of the other conferences to be held, in order to mobilize UNESCO's resources to follow up the conferences in terms of education and information. A new transdisciplinary and inter-agency cooperation project on "Environment and population, education and information for development (EPD)" was launched in 1994. Initiatives are also being taken, both by UNESCO and by individual countries, with respect to teacher training. A short course will be made available on video in 1997, to be tested and refined at an international workshop to be held in Vancouver, Canada, in August 1997. This meeting will also be used as a forum to consolidate an international network of teacher training institutions that is being developed under the aegis of UNESCO to draft guidelines for reorienting teacher training towards sustainable development at primary and secondary levels.

21. New curricula and teaching materials are being developed. The World Health Organization (WHO) has produced a textbook and teaching kit on basic environmental health for university level. The Food and Agriculture Organization of the United Nations (FAO) is developing agro-ecological curriculum materials. The United Nations Centre for Human Settlements (Habitat) is using a 13-volume series entitled "Training for Local Leadership" targeted to local civic leaders.

22. Building on the experience of the former joint UNESCO-United Nations Environment Programme (UNEP) International Environmental Education Programme (IEEP) which came to an end in 1995, the United Nations system and other international organizations with UNESCO as task manager are now working to develop a new international alliance so as to further the broader notion of education for sustainable development, as called for by the Commission on Sustainable Development work programme. The primary thrust of action since the fourth session of the Commission on Sustainable Development has been:

(a) To continue discussions within the United Nations system to develop a broad cooperative framework for action that would be bold and imaginative and would concentrate on a limited number of key undertakings during the next four

to five years, which would allow for participation from outside the United Nations system;

(b) To publicize the new Commission on Sustainable Development work programme within the United Nations system, as well as among non-governmental organizations, the educational community, the private sector and other stakeholders, and to seek input and ideas for further development of the work programme and for use by UNESCO as task manager for the purpose of reporting to the Commission on Sustainable Development. To this end, a joint UNESCO-IUCN meeting on education and public awareness for sustainable development was held in Montreal in October 1996 in conjunction with the IUCN World Conservation Congress;

(c) To broaden participation in and create partnerships among relevant bodies of the United Nations system, Governments and major groups, in particular non-governmental organizations, business and industry, youth, and the educational community.

23. The Commission on Sustainable Development also called for the mobilization and broadening of networks to deliver education, public awareness and training, particularly at the grass-roots level. There has been significant progress since the United Nations Conference on Environment and Development although much work remains to be done to tap the full range of potential actors. Since 1992, emphasis has been placed on either reinforcing or introducing educational concerns into existing networks related to sustainable development. Examples include more than 30 UNESCO Chairs for Sustainable Development, networks of professional educators and scientists involved in UNESCO's major science programmes, and the network of the IUCN Commission on Education and Communications. In 1997, UNESCO plans to undertake an inventory of key networks that could contribute to the new, broader vision of education in terms of sustainability, so that the diffusion of information and the exchange of ideas and experience can be improved. During the last two years, FAO has been working with a network of training institutions to integrate environmental education training into agricultural extension training systems and programmes.

24. Since the United Nations Conference on Environment and Development, action to implement Agenda 21 has been targeted increasingly towards the municipality and community level, whereas national Governments are concerned more with developing policy frameworks and incentives. It is at the local level that people are most easily motivated and mobilized to take action towards solving the concrete problems that affect their daily lives. It is thus particularly at the local level that new partnerships among the different stakeholders are coalescing, often through local Agenda 21 action plans. Public awareness-raising is particularly important in this context, with the household being a key point of entry.

25. Partnerships with youth are particularly effective at this level, an example being work initiated on the basis of the book Rescue Mission: Planet Earth,7/ a youth version of Agenda 21 sponsored by Peace child International, UNESCO, the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF) and UNEP. In Canada, youth groups developed a special action guide tailored to local conditions that has been distributed to every

school and mayor in the country in order to mobilize youth to take personal responsibility for implementing Agenda 21.

26. Numerous local and international non-governmental organizations are particularly active in the field of education. In fact, in many countries non-governmental organizations have proved to be key actors in disseminating information and developing materials at the local level. In this respect, UNEP initiated in 1996 a "Global Environmental Citizenship Programme" aimed in particular at mobilizing non-governmental organizations and media support for promoting attitudinal and behavioural changes. In the initial consultations between UNESCO, UNEP and IUCN on developing a broad international alliance for education for sustainable development, the crucial role of non-governmental organizations and other major groups was stressed. These groups will be fully involved in implementing the Commission on Sustainable Development work programme.

IV. UNFULFILLED EXPECTATIONS

27. The scope and complexity of chapter 36 was, until the adoption of a work programme by the Commission on Sustainable Development, in itself an impediment to implementation. While the work programme is now focusing efforts on a few agreed-upon priorities, the wide range of objectives, target groups, key actors and stakeholders remain daunting.

28. Education for sustainable development is still an emerging concept that requires further clarification and consensus. Of particular concern to many is its relationship to the concept of environmental education which emerged after the United Nations Conference on the Human Environment in 1972 and focused primarily on the environment and its protection. Environmental education is now seen as an important part of education for sustainable development but not as its equivalent.

29. The challenge is to integrate the concepts of human development, social development and economic development with environmental protection in a holistic, interdisciplinary conceptual framework. The task is therefore far broader and deeper than the "conversion" of environmental education towards sustainable development advocated in chapter 36, and will necessarily involve all the disciplines and, for formal education, virtually all parts of the school curricula.

30. The gap between science and education compounds the difficulty of clarifying the content of education for sustainable development, which needs to be based on interdisciplinary, accurate, up-to-date and unbiased information. Such information is, however, slow to move from the realm of academics and experts to that of the non-specialist users of such information.

31. The integration of sustainable development concerns into formal education systems is also hampered by a lack of the kind of planners, teachers and administrators who are trained in interdisciplinary approaches in general and in environment and development issues in particular.

32. Formal education systems will best be able to contribute towards sustainable development through restructuring and reform, coupled with pre- and in-service teacher training. The time required for such change needs to be taken into account, however, together with the budget restrictions prevalent in most countries.

33. The political will needed to successfully reorient education, public awareness and training towards sustainable development is still lacking. Although there has been greater understanding of the fundamental importance of education since the United Nations Conference on Environment and Development, this recognition has not been translated into the necessary financial investments. Putting money into education needs to be understood in a long-term perspective, as an investment in providing, over time, the essential underpinning of public support and therefore public action without which the world cannot achieve sustainability. If the necessary financing is not forthcoming, chapter 36 risks becoming the forgotten priority of the United Nations Conference on Environment and Development.

V. EMERGING PRIORITIES

34. The decision of the Commission on Sustainable Development at its fourth session to initiate a special work programme on chapter 36 has been a landmark with respect to education, public awareness and training. This work programme reflects a consensus on the priorities for future action that have emerged since the United Nations Conference on Environment and Development, namely:

(a) Developing a broad international alliance and promoting networks;

(b) Integrating implementation of chapter 36 with analogous recommendations in the action plans of the major United Nations conferences and conventions;

(c) Advising on how education and training can be integrated into national educational policies;

(d) Refining the concept and key messages of education for sustainable development;

(e) Advancing education and training at national level;

(f) Providing financial and technical support to the developing countries;

(g) Developing new partnership arrangements exploiting the communications technologies;

(h) Working in partnership with youth;

(i) Analysing current investments in education;

(j) Making the relevant linkages with the Commission on Sustainable Development work programme on changing production and consumption patterns.

35. These priorities have emerged after a period of both conceptual and operational ferment in terms of understanding the profound role of education in achieving sustainability. The work programme provides a much-needed focus for action for a chapter that is extremely wide-ranging and complex, and touches on virtually all other chapters of Agenda 21.

36. The work programme initiated by the Commission on Sustainable Development at its fourth session is still only a framework, or skeleton, that needs to be developed in greater detail. While efforts in this direction have started, the fact that the implications of the work programme are far-reaching still needs to be recognized. The changes called for - reforming educational systems, rethinking the outcomes of education, developing an interdisciplinary conceptual framework that reflects the complexity of the notion of sustainable development, agreeing on the key messages, changing attitude, lifestyles, and so on - will require time and the concerted effort and support of all sectors of society.

37. In order to continue in this direction, what is needed are:

(a) Endorsement of the preliminary steps that are being taken to implement the work programme, as outlined in this report;

(b) Continued priority being given by the Commission on Sustainable Development to education, public awareness and training in its future work;

(c) A fully developed work programme for consideration by the Commission on Sustainable Development;

(d) Assigning of priority to the Commission on Sustainable Development work programme within the United Nations system, and in particular by UNESCO as task manager for chapter 36;

(e) Initiatives by Governments and major groups to further develop the work programme, with the cooperation of the United Nations system, as appropriate;

(f) Enhanced financing and investment in education for sustainable development.

Notes

1/ Report of the United Nations Conference on Environment and Development, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

2/ See Official Records of the Economic and Social Council, 1996, Supplement No. 8 (E/1996/28), chap. I, Sect. C, decision 4/11, para. 2.

3/ United Nations Environment Programme, Convention on Biological Diversity (Environmental Law and Institution Programme Activity Centre), June 1992.

4/ A/AC.237/18 (Part II)/Add.1 and Corr.1, annex I.

5/ A/49/84/Add.2, annex, appendix II.

6/ Learning: the Treasure Within: Report to UNESCO of the International Commission on Education for the Twenty-first Century (Paris, UNESCO, 1996).

7/ Kingfisher Books, 1995. Available from United Nations publications.

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Overall progress achieved since the United Nations Conference on Environment and Development

Report of the Secretary-General

Addendum

National mechanisms and international cooperation for capacity-building in developing countries*

(Chapter 37 of Agenda 21)

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* The present report was prepared by the United Nations Development Programme (UNDP) as task manager for chapter 37 of Agenda 21, in accordance with arrangements agreed to by the Inter-Agency Committee on Sustainable Development (IACSD). It is the result of consultation and information exchange between United Nations agencies, international and national organizations, interested government agencies and a range of other institutions, individuals and major group representatives.

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INTRODUCTION

1. The present report reviews progress made in the implementation of the objectives set out in chapter 37 of Agenda 21 (National mechanisms and international cooperation for capacity-building in developing countries),[1] taking into account the decisions taken by the Commission on Sustainable Development on this subject in 1994 and 1996 at its second and fourth sessions respectively.

2. A first report on capacity-building was submitted to the Commission on Sustainable Development in spring 1994 and a second (E/CN.17/1996/15) two years later in 1996. This report is the third in the series and sums up the major trends and achievements to date in capacity development since 1992.

3. It is important to have a sense of perspective in analysing the overall impact of Agenda 21 with respect to capacity-building. Many of the trends highlighted in this report reflect long-term shifts in approaches to capacity-building, which started well before the Rio Conference. These trends will continue to influence and shape capacity development well into the twenty-first century. The strategic directions of Agenda 21 were thus as much a reflection of the continuing trends as they were a cause. As such, while assessing chapter 37 one must bear in mind that Agenda 21 was only one of many factors influencing donor and country decision makers. One of the main lessons of experience in capacity development has been the realization of the importance of patience, persistence, a shared vision and a long-term horizon when it comes to developing sustainable capacities. The five-year period covered by this report thus represents an important stretch of time, albeit only a small segment in a much broader process.

4. In general, the present report is more positive than its predecessors in 1994 and 1996. While enormous challenges still remain with respect to the implementation of Agenda 21, contributors to this report both from within the United Nations system and from non-governmental organizations pointed to developments on a number of fronts that indicate some genuine progress in selected areas of capacity-building since the United Nations Conference on Environment and Development. This more positive prognosis applies both to specific issues such as strategies and participation and to certain regions of the world such as Latin America and the Caribbean.

I. SELECTING KEY OBJECTIVES

5. Agenda 21 defines capacity development as the process and means through which national Governments and local communities develop the necessary skills and expertise to manage their environment and natural resources in a sustainable manner within their daily activities. To promote it, chapter 37 of Agenda 21 emphasizes the following main themes:

(a) A cross-sectoral, multidisciplinary approach to planning and implementation;

(b) Improved capabilities in both the public and private sectors;

(c) Optimum use of national (as opposed to expatriate) human and organizational resources;

(d) Reorientation and coordination of external support for sustainable development;

(d) Better integration of environment protection, economic development and social equity in the development of capacities at the local, regional, national and international levels.

II. REPORTING ON AND ANALYSING SUCCESS

6. Briefly, almost all the capacity-building initiatives supporting the themes mentioned in Agenda 21 can be grouped into eight main areas - environmental strategy and policy, macroeconomic strategy, consensus-building, environmental management capacity, normative and legal frameworks, scientific and socioeconomic research, technology transfer and public outreach. The main advances in the last five years have been in the first three areas. Slower progress is evident in the remainder. More specifically, the more successful activities can be briefly described as follows.

7. Capacity-building for sustainable strategy and policy, particularly the design of national plans and strategies for conservation and the environment, has been the most identifiable success of the post-United Nations Conference on Environment and Development years. Countries ranging from China to Swaziland have put in place the processes to produce Agenda 21 strategies, national conservation strategies and environmental action plans with help from organizations such as the World Bank, the United Nations Development Programme (UNDP), the World Conservation Union (IUCN) and bilateral donors. Over 40 African countries today have some sort of coordinating mechanisms to produce such plans.

8. Many of the lessons of experience coming out of these planning exercises have been captured and synthesized for wider use by the International Institute for Environment and Development (IIED), the Capacity 21 programme of UNDP and the World Resources Institute. Environmental considerations are also finding their way into macroeconomic strategy. Capacity-building programmes in India, Costa Rica and the Gambia have brought "green accounting" methods into their national policy- and decision-making processes. Capacity 21 programmes in China, Malawi and the United Republic of Tanzania are supporting the efforts of their respective planning bodies to incorporate sustainable development principles into their overall planning procedures.

9. In the past few months, over 30 Governments have asked the Food and Agriculture Organization of the United Nations (FAO) for assistance in planning and implementing more integrated approaches to all aspects of land-use resources and management. At the city level, efforts are being made to deal more comprehensively with the overlapping issues of air, health, water and waste, and these efforts need to be enhanced.

10. The emphasis in Agenda 21 on consensus-building and more participatory approaches to sustainable development has influenced a new generation of capacity-building projects since 1992. Most activities aimed at environmental management and sustainable development now make explicit efforts to effect stakeholder and beneficiary assessment. The trends towards decentralization and privatization are reinforcing the need for greater inclusion.

11. In Bolivia, for example, Capacity 21 supported a process that included community consultations, and subregional and regional meetings leading to a national convention on the implementation of Bolivia's Agenda 21 in 1996. A participatory process has been used in the Philippines to involve a wide range of national interest groups. The Sustainable Cities Programme, a joint United Nations Centre for Human Settlements (Habitat)/United Nations Environment Programme (UNEP) programme to strengthen local environmental management capacities, has mobilized the support of close to 30 multi- and bilateral institutions across four continents. Demonstration activities are under way in 20 cities, and the programme is now supporting a network for the sharing of know-how in Environmental Planning and Management in over 70 cities around the world; and both donors and partner Governments are making efforts to increase the "demand" on organizations providing services by making performance standards more transparent. More information is also being provided to public groups through commercial radio and television, publications and newspapers.

12. Agenda 21 has been catalytic for identifying a new role for government in the pursuit of sustainable development. In most countries, national and international non-governmental organizations, community-based organizations and the private sector now help carry out functions that were seen previously as exclusively a state responsibility. New forms of environmental management and service delivery are now emerging. Government-non-governmental organizations and government-private sector partnerships are now much more in evidence and these trends have been encouraged through the outside support of programmes such as Capacity 21 and the Global Environment Facility. To cite one example, the Department for Development Support and Management Services of the United Nations Secretariat recently hosted a symposium (May 1996) in New York under the title "Corporations, Communities and Sustainable Development". Leading mining companies, representatives of Governments, and national and international non-governmental organizations attended and discussed a variety of issues of concern to the private sector including legal protection, investment guarantees, incentives and a favourable environment for financing. More efforts are also under way to develop the capacity of indigenous groups. The UNDP-sponsored study "Conserving indigenous knowledge: Integrating two systems of innovation" was an important step in that process.

III. PROMISING CHANGES

13. The five years since the United Nations Conference on Environment and Development have witnessed a rapid growth in regional collaboration. This now takes a variety of forms including international agreements, information exchanges and technical cooperation of various kinds. The need and desire for more regional cooperation can be seen in examples such as the Regional Centre for Services in Surveying, Mapping and Remote Sensing in Eastern and Southern

Africa, the Mediterranean Technical Assistance Programme (METAP) and a number of river basin management programmes in Latin America.

14. Other examples are the Sustainable Cities Programme, the Africa 2000 programme on water supply and sanitation which emphasizes community management of services and the Network for Cooperation in Integrated Water Resource Management for Sustainable Development in Latin America and the Caribbean. In Africa, there is now an African network of environmental impact assessment experts and a growing number of connections among environmental centres both in government and in universities. The Economic Commission for Africa (ECA) is also investing in a compilation of best practice in capacity-building ("best practice studies in capacity-building") in support of the ECA framework agenda for Agenda 21. The Economic Commission for Europe (ECE) and UNEP are cooperating on a joint project on strengthening environmental management capabilities in Eastern and Central Europe. Moreover, the Economic and Social Commission for Asia and the Pacific (ESCAP), UNDP and the Asian Development Bank are collaborating on a Regional Action Programme for Environmentally Sound and Sustainable Development in Asia and the Pacific 1996-2000. This greater acceptance of collaborative behaviour across national borders should facilitate capacity-building to deal with merging global issues such as climate change, desertification and ozone depletion.

15. Since the United Nations Conference on Environment and Development, there has been a rapid growth in demand by developing countries and countries with economies in transition for financial and technical support to projects and activities related to environment and development and the goals of Agenda 21. Accordingly, the overall number of technical cooperation and advisory services rendered in this area has increased substantially.

16. The assistance provided by the operational and funding organizations in response to these demands has thus become more focused at the country level where responsibility for action leading to concrete results is considered essential. For instance, best practice initiatives and "model projects" in sustainable development have been more widely developed and encouraged. The criteria used for the selection of these projects include (a) response to a real need of the country; (b) demonstration of significant economic, social or environmental impact for the end-user; (c) demonstration of governmental commitment and the infrastructure necessary for project success and sustainability.

17. There is growing evidence of a much more systematic and strategic approach to capacity-building in many countries. In the past, both donors and partner Governments saw capacity-building as the inevitable result of technical assistance or training or the outcome of the formulation of improved policies. This did not happen. Much of the work in support of Agenda 21 has reinforced the need for participants to focus more directly on capacity-building as a "strategic development umbrella" in the words of the World Wide Fund for Nature (WWF); and there also is emerging a more complex view of capacity-building itself which includes a more system-wide approach having to do with stakeholders, the supply and demand for better performance, better incentives, information and civic involvement.

18. Over the past year, the World Bank has encouraged a network of African participants to come up with a more systematic, demand-driven approach that the Bank can support. Similarly, ECA has devised "A Framework for Building and Utilizing Critical Capacities in Africa" that Governments and non-State participants can use to guide their activities. This initiative led in turn to a programme called "Management of Development: National Capacity Strengthening" at the International Training Centre of the International Labour Organization (ILO), Turin, in which 35 country teams and 222 participants have participated. The scope of capacity-building has also extended beyond the organizational level. The UNEP/UNDP Environmental Law Programme assists seven African countries in developing their legal capacities for effective environmental management.

19. The design of donor technical assistance has improved over the past five years. Much greater attention is now paid to issues having to do with the creation, or at least the enhancement, of a sustainable institutional legacy. Less reliance is now placed on the use of expatriate advisers and more on national expertise. Much more attention is now paid to national commitment and ownership, to enlisting stakeholder and beneficiary support and to maintaining a national coalition of support that can energize a programme. Environmental projects now put less emphasis on the transfer of technical expertise and feature a greater focus on the human, institutional and social aspects of sustainable development. Part of the impetus for these reforms has come from the general dissatisfaction within the donor community concerning the outcomes of their programmes; but part of such impetus has also come out of the Agenda 21 experience.

20. There is a growing number of countries that are implementing Agenda 21 with courage and foresight. Costa Rica, for example, has embarked on "irreversible steps" to promote sustainable development. The Philippines is intent on becoming one of the first of the "green tigers" of Asia. Much of this activity signals an emerging determination in different parts of the world to move ahead on Agenda 21 through capacity-building, with or without external support.

21. The Organisation for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) has debated the ideal process for the development of environmental strategies, and more recently has extended those principles to encompass the development of strategies for sustainable development. DAC stresses that the value of a strategy lies not only in the quality of any documents that may be produced; in fact, it lies principally in the process by which the strategy is prepared. Thus, full participation of all involved stakeholders is necessary. Strategy development is neither static nor linear, but consists of proposals and ideas being constantly tested, and the results of testing feeding back into revisions of the strategy. Thus, the process lies at the heart of the strategy, and any documents that are produced become tools or information materials. This contrasts sharply with the traditional planning approach, in which specialists work to prepare a planning document that is then the medium-term or permanent basis for action.

22. Capacity 21 has applied similar principles in helping countries to develop their national mechanisms for sustainable development. Capacity 21 programmes have taken integration, participation and information as key components of

Agenda 21 strategies. Integration of sectors ensures true multisectoral planning. Participation ensures that the evolving strategy is of the highest quality and has the support of those who will apply it. Access to information empowers societies to make good strategies. After over three years of Capacity 21 implementation, there is no uniform definition of what exactly constitutes a strategy for sustainable development. Some countries (China, the Philippines, Bolivia) have prepared national Agenda 21 documents. Others (for example, Malawi, Nepal, the Gambia) have built upon existing national environmental plans to erect broad programmes that tackle the challenges of Agenda 21. They are attempting to place environment in its proper place within development. All Capacity 21 countries have based their processes on existing plans, strategies, conventions and so forth, and all regard the final strategy as a coordinating objective-setting tool. In every case, the process of preparing the strategy lies at the heart of the exercise.

23. As of May 1996, total contributions to Capacity 21 stood at about $57.0 million. Since 1993, the programme has helped to fund programmes and projects in over 40 countries. It has designed a monitoring and reporting strategy that has been published and widely disseminated, and it has circulated information and lessons on capacity-building for sustainable development through publications, workshops and through the World Wide Web.

24. Progress is being made on the development on a number of operational tools to assist Governments and other non-State actors. Examples include the conservation capacity-building (CCB) process of WWF which looks to include "ground mapping" - a comprehensive capacity needs assessment - as an integral part of programme design. FAO and UNEP have devised new techniques for land-use planning which are now being disseminated through a series of workshops. A growing range of applied process management tools are emerging out of programmes such as the Sustainable Cities Programme. The Committee on Environmental Policy (ECE) has devised country environmental performance reviews (for example for Poland, Bulgaria and Belarus) that look at capacity-building at all levels including national plans and policies, legislation, compliance and monitoring. Furthermore, most countries are beginning to adopt or design information systems to support environmental management.

25. One of the main factors likely to shape capacity-building efforts in the years ahead is the global information management and communications revolution. Indeed, its impact has begun to be felt in ways not foreseen in Agenda 21. The Sustainable Development Networking Programme (SDNP) managed by UNDP, which now connects almost 30 countries around the world, has the potential to reach 65 by late 1997. The free exchange of information and best practice over global electronic networks such as the Internet is enhancing national and regional cooperation, for example, in river basin management. The UNDP Web site now features models and capacity-building frameworks such as CAPBUILD.

26. Teacher-training and computer-aided teaching approaches having to do with environmental management are now more freely available, and the access to technical information through computer networks will likely reshape the current delivery systems for conventional technical assistance that have proved so costly in the 1980s and 1990s. A number of efforts are currently under way to extend the coverage of computer networks to areas of the developing world, such

as Africa, Central America and South Asia, that have lagged behind. The Network for Environment and Sustainable Development in Africa (NESDA), for example, has designed a programme to assist in African countries acquiring access to the Internet, with five countries having joined in the last few months and five more scheduled to join before the end of 1996.

27. Another example of a revolution in communications is in the area of air traffic control. The existing global communication, navigation, surveillance/air traffic management (CNS/ATM) is undergoing a rapid transformation led by the International Civil Aviation Organization (ICAO). Assistance to capacity-building in this regard, provided at subregional and regional levels, is expected to result in increased efficiency in operations while also enhancing environmental benefits.

IV. UNFULFILLED EXPECTATIONS

28. The encouraging trends mentioned above are evidently only a part of the broader picture of capacity-building since the Rio conference. It remains true that, for the most part, the solutions to the technical problems having to do with sustainable development are well known. What is lacking is the development of the social and institutional structures that are needed to keep pace with the policy, regulatory and service demands arising from rapid population growth, increased complexity and the changes in technology; and underlying this gap is the issue of good governance and its impact on building capacities and developing performance standards for sustainable development.

29. As pointed out in this report, much of the progress to date has been in the areas of strategy formulation, greater participation and information exchange, but many familiar strategy implementation constraints still remain. The actual application of the integrated sustainable development approach at the field level is a gradual and evolving process. The integration of environment and development is not necessarily straightforward in practice, and the process has been slow. The prospect still exists of an overproduction of strategies, plans, policies and technical designs and an undersupply of the skills, resources, institutions and public demands needed to implement them.

30. What is lacking in many countries are the structures and capacities to carry out many of the technical functions associated with environmental management such as natural resources monitoring, environmental impact assessment, pollution regulation and other more technical activities. These, in turn, require the strengthening of ministries and agencies such as those in the areas of agriculture and forestry, the reshaping of training curricula, the creation of new institutes, civil service pay reform and the modification of laws and regulatory frameworks. Some progress has been made in these areas such as the establishment by the United Nations Industrial Development Organization (UNIDO) in cooperation with UNEP of eight national cleaner production centres (see report of the Secretary-General on chapter 34 (E/CN.17/1996/2/Add.24)), but major gaps in capacity exist at this level. The work of putting such technical, scientific and institutional structures in place represents the long-term challenge facing many countries.

31. Over the longer term, countries will need to develop the ability to learn and institutionalize new roles and new performance standards with respect to sustainable development. Capacity-building in this context will likely entail more far-reaching organizational, social and even political reforms. Of critical importance will be two factors: first, the enhancement of the role of groups outside government such as non-governmental organizations and the private sector; and second, the shift to a more cross-sectoral approach to the design and implementation of sustainable development. As expected, this shift is proving to be one of the most difficult to achieve given the embedded patterns of behaviour in Governments, donors, professional groups and other participants. Finally, funding mechanisms will need to become more responsive to the evolutionary nature of capacity-building and to be structured less on the "start-stop" basis associated with conventional project financing.

32. Ways and means to mobilize locally available financial resources, including from the private sector, should be explored. Strengthening public-private partnerships is one way to mobilize such resources. Sectoral agencies should include the economic and finance authorities of countries in their dialogues on financial mobilization.

V. EMERGING PRIORITIES

33. The evidence now seems overwhelming that donor- and supply-driven technical assistance has little sustainable impact. The trend towards programme designs that are flexible, learning-oriented and based on national ownership, commitment and energy needs to be accelerated. Donors still have too few full-time staff who specialize in institutional and capacity programming. All the participants, including the donors, must focus more systematically on overcoming the challenges inherent in capacity-building programmes, so as to sustain the progress made so far.

34. Specific attention needs to be paid to operational questions and to making the connection between the broader strategic aspects of capacity-building and their operational implications. There is a growing interest in many countries in getting rapid access to best operational practice in capacity-building. Donors can do much to fill this need for collaborative learning by organizing themselves so as to capture and disseminate their own experience. More support for institutional and professional evaluations, compilations of best practice, needs assessments and training programmes will be needed. Assistance with the establishment of networks is one option. Another is the support of forums that bring practitioners together. DAC (OECD) sponsored a workshop in Rome in December 1996 on best practices in capacity-building in environment within the context of sustainable development. This type of initiative might be replicated on a wider scale in other areas, as well as at the regional level.

35. National sustainable development strategies are an important mechanism for enhancing and linking national capacity, in terms of their bringing together all aspects of sustainability as well as all the actors concerned. The Bretton Woods institutions - the World Bank and the International Monetary Fund (IMF) - and the United Nations system should work together in capacity-building on sustainable development strategies and their implementation. The work in

respect of the Inter-Agency Task Force on Sustainable Development (IACSD) strategies needs to be intensified. Support to UNDP's Capacity 21 programme should be complemented with support at both the national and the regional levels. Broader involvement of other United Nations organizations in the further development and implementation of the programme is desirable. The scope of the programme must address all elements of sustainable development. Capacity-building efforts should not stop after sustainable development strategies have been formulated, since the implementation of such strategies requires continuous support and motivation at the regional level.

36. In view of the rapidly increasing responsibilities of local authorities going along with decentralization processes, it is very important to develop properly designed and user-friendly training materials for local leaders. The current focus of capacity-building is still too much on professionals, and too little on local leaders, councillors and others. This gap in capacity often leads to a communication breakdown on issues related to environmental sustainability, which in itself is a major hindrance to progress in sustainable local development policies and practices.

37. A number of submissions that contributed to this report had suggested that some efforts should be made by field practitioners to review the implementation of Agenda 21 five years after the United Nations Conference on Environment and Development. In some cases, this kind of retrospective activity is already taking place. For example, the Earth Council in cooperation with a number of African non-governmental organization networks is planning a series of three workshops in collaboration with African non-governmental organization networks including NESDA. Such forums should also include some attention to capacity-building, given its central importance.

Notes

[1] Report of the United Nations Conference on Environment and Development, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

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Report of the Secretary-General

Addendum

International institutional arrangements*

(Chapter 38 of Agenda 21)

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INTRODUCTION

1. The present report reviews progress made in the implementation of the objectives set out in chapter 38 of Agenda 21 (International institutional arrangements),[1] taking into account the decisions taken by the Commission on Sustainable Development on this subject in 1994 and 1996 at its second and fourth sessions respectively. A background paper providing more detailed analysis on institutional arrangements within the United Nations system is available separately. The background paper and this report have been prepared on the basis of consultations undertaken during the inter-agency expert meeting on post-United Nations Conference on Environment and Development institutional arrangements held in New York from 31 October to 1 November 1997. A description of post-United Nations Conference on Environment and Development institutional arrangements undertaken by individual organizations is contained in a 1996 report of the Secretary-General (E/CN.17/1996/16) and in 1996 background paper No. 1.

2. It is important to place the assessment of post-United Nations Conference on Environment and Development international institutional arrangements in context. Agenda 21 and the other agreements associated with the United Nations Conference on Environment and Development are far-reaching in their recognition of the fact that the social, economic, and environmental dimensions of development must be treated in an integrated and balanced way. They affirm that individual sectors can no longer be dealt with in isolation. New and stronger relationships are encouraged among the institutions of the United Nations system, international financial institutions, other intergovernmental bodies outside the United Nations system, including regional organizations, and major groups. These interactions pose particular challenges for the institutional arrangements put in place after the United Nations Conference on Environment and Development. They require multidisciplinary approaches among specialists and intersectoral coordination at local, national, regional and global levels.

3. In addition, the post-United Nations Conference on Environment and Development institutional arrangements take place against the backdrop of ongoing efforts to strengthen, restructure and revitalize the United Nations system in the economic, social and related fields. Moreover, the growing number of international conventions calls for increased awareness of linkages between their intergovernmental and support arrangements and those of the United Nations system and other organizations.

I. SELECTING KEY OBJECTIVES

4. The focus of this report is on the assessment of the performance of the United Nations system in achieving the key objectives of chapter 38 of Agenda 21. National implementation and non-governmental organizations, other aspects of the chapter, will be dealt with by national profiles, the report of the Secretary-General on chapter 8 (E/CN.17/1997/2/Add.7), the report on major groups (E/CN.17/1997/2/Add.22), in particular on chapters 27 and 28, and the report on chapter 37 (E/CN.17/1997/2/Add.27) to some extent. In this regard, four objectives of chapter 38 will be addressed in this report.

5. The first objective is enhancement of the role and functioning of the United Nations system in the field of environment and development. In this area, all relevant agencies, organizations and programmes of the United Nations system are to adopt concrete programmes for the implementation of Agenda 21 and to provide policy guidance for United Nations activities and advice to Governments, upon request, within their areas of competence. The second is strengthening cooperation and coordination on environment and development in the United Nations system. The third is strengthening institutional capabilities and arrangements required for the effective implementation, follow-up and review of Agenda 21. The fourth is assistance in strengthening and coordination of national, subregional and regional capacities and actions in the areas of environment and development.

II. PROMISING CHANGES

A. Post-United Nations Conference on Environment and Development institutional arrangements

1. Role of the Commission on Sustainable Development

(a) Functioning of the Commission on Sustainable Development

6. The Commission on Sustainable Development, established in 1992 by the General Assembly in its resolution 47/191 as a functional commission of the Economic and Social Council, meets annually for two to three weeks.

7. Active inter-sessional work is an important feature of the Commission on Sustainable Development's approach to sustainable development. This has included numerous inter-sessional meetings and initiatives organized, individually and jointly, by Governments, intergovernmental organizations and non-governmental organizations which significantly enriched substantive preparations for the annual sessions of the Commission on Sustainable Development and the meetings of its subsidiary bodies. The Commission on Sustainable Development has also held two annual Inter-sessional Ad Hoc Open-ended Working Groups which meet prior to the regular sessions of the Commission to prepare its discussions on specific agenda items.

8. The Bureaux of the Commission met regularly during the period 1993-1996, providing policy guidance on preparations for the upcoming sessions of the Commission on Sustainable Development. The work of the Bureau of the Commission on Sustainable Development contributed to the greater visibility of the Commission on Sustainable Development in other meetings and processes relevant to sustainable development and enhanced the overall outreach of the Commission. In light of the above, Member States, in the context of the 1997 review, may wish to consider the proposal, tabled by the Bureau of the Commission on Sustainable Development at its second session and supported by a number of countries, to elect the future Bureau of the Commission on Sustainable Development in such a manner and at such a time as to allow it not only to direct preparations of the upcoming session of the Commission on Sustainable Development, but also to be responsible for conducting the upcoming session.

9. At the third session of the Commission on Sustainable Development in 1995, an open-ended Ad Hoc Intergovernmental Panel on Forests (IPF) was established as a subsidiary body of the Commission on Sustainable Development, with a two-year mandate to pursue consensus and formulate coordinated proposals for action aimed at combating deforestation and forest degradation and to promote management, conservation and sustainable development of all types of forests. The Panel, which has met four times and will be submitting its final report to the Commission on Sustainable Development in 1997, has been supported by: (a) an informal high-level inter-agency task force consisting of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), the International Tropical Timber Organization (ITTO), the World Bank, the Department for Policy Coordination and Sustainable Development of the United Nations Secretariat and the secretariat of the Convention on Biological Diversity;[2] and (b) a small secretariat funded by voluntary extrabudgetary contributions including secondment of staff by FAO, UNEP, UNDP and ITTO. These institutional arrangements, with their emphasis on informal inter-agency collaboration and interaction in meeting the work requirements of the Panel, have been instrumental in its effective functioning.

(b) Work programme

10. The Commission on Sustainable Development adopted a multi-year thematic programme of work[3] at its first session in 1993 and completed it at its fourth session in 1996. This first programme of work was organized in a way that allowed for in-depth review of all individual chapters of Agenda 21 as well as review of the progress in the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States.[4] While some cross-sectoral chapters have been reviewed every year, other cross-sectoral chapters and most of the sectoral ones have been considered once over the period of three years. This method of work has facilitated the Commission on Sustainable Development's consideration of all chapters of Agenda 21 at least once. It has assisted in the analysis of institutional and policy changes and activities at the international, national and "major groups" level to implement all chapters of Agenda 21. It has also helped the Commission on Sustainable Development to adopt specific recommendations to operationalize specific recommendations of the United Nations Conference on Environment and Development, and to provide a forum for exchange of relevant experiences.

11. As an outcome of this initial cycle of review, the Commission on Sustainable Development adopted four specific work programmes on (a) indicators for sustainable development, (b) transfer of environmentally sound technologies, cooperation and capacity-building, (c) changing production and consumption patterns and (d) education, public awareness and training.

(c) Salient features

12. Each session of the Commission has included a high-level segment, which has taken the form of a dialogue on priority issues of concern. It has been attended by a large number of ministers (over 40) and high-level decision makers from a variety of ministries from all over the world.

13. The Commission on Sustainable Development has functioned as a high-level policy organ for the promotion of sustainable development, emphasizing an integrated approach involving all actors in a participatory process. Examples of the areas where the Commission on Sustainable Development has played an agenda-setting role include, most particularly, the global freshwater assessment initiated by the Commission on Sustainable Development and the Ad Hoc Intergovernmental Panel on Forests, mentioned above. The Commission on Sustainable Development also identified areas where major gaps existed in the international discussion of sustainable development, including such economic sectors as energy, transport and tourism.

14. The sessions of the Commission on Sustainable Development have seen the involvement of a larger number of major group representatives, who have not only contributed directly and substantively to the work of the Commission, but also organized a large number of side events on relevant topics which have added to the richness of the debate during the regular sessions.

15. In pursuance of the decision taken by the Commission on Sustainable Development at its first session in 1993, Governments and organizations have submitted information and reports at subsequent sessions of the Commission. Reporting has been progressively streamlined and simplified at the request of the Commission and in consultation among United Nations system organizations and the convention secretariats. The national reports, which in previous years were summarized and presented in the context of chapters under review, have been compiled, for the 1997 session, into country profiles that can be used as the basis for future reporting and updating. During the third and fourth sessions of the Commission, selective country presentations were made at the plenary meetings. This allowed in-depth consideration and direct exchange of views on specific country experiences in relation to the chapters under review.

16. The United Nations system has contributed extensively to the preparations for the sessions of the Commission on Sustainable Development. The task manager system created by the Inter-Agency Committee on Sustainable Development (IACSD) has operated effectively in undertaking consultations, preparing reports and ensuring follow-up for the Commission on Sustainable Development. In that process, task managers solicited inputs from relevant organizations within and outside the United Nations system, including major groups. This participatory approach has been appreciated by all parties concerned and has contributed to strengthening contacts and further prospects for cooperation.

2. Linking the Commission on Sustainable Development with the governing bodies of various organizations

17. For most organizations, mandates received from their respective governing bodies have been complementary, reaffirming decisions taken by the Commission on Sustainable Development with respect to Agenda 21 implementation and follow-up.

18. Agency governing bodies have been kept regularly informed of Commission on Sustainable Development decisions and in some cases these bodies consider agency reports before they are submitted to the Commission on Sustainable Development. In other cases, secretariats have already incorporated Commission on Sustainable

Development recommendations into documentation prepared for the governing bodies. At the same time, the task manager system has helped ensure that the decisions and concerns of other governing bodies are incorporated in the reports of the Secretary-General to the Commission on Sustainable Development.

19. That sustainable development issues have continued to receive high-level political attention in the governing bodies of the various organizations is reflected in the fact that programmes of relevance to sustainable development have, in general, been less subject to across-the-board budget cuts.

Linkages with the United Nations Environment Programme (UNEP)

20. Agenda 21, in chapter 38, stressed the need for an enhanced and strengthened role for UNEP and its Governing Council, and that the Governing Council should, within its mandate, continue to play its role with regard to policy guidance and coordination in the field of the environment, taking into account the development perspective.

21. UNEP's Governing Council maintains a close relationship with the Commission on Sustainable Development. Accordingly, relevant Commission on Sustainable Development decisions are brought to the attention of the Governing Council at its regular sessions, in order that they may be taken fully into account in the execution of its role of directing and prioritizing the work of the Programme. Thus, UNEP's programme of work for the biennium 1996-1997, as approved by the Governing Council, is an attempt to provide the right framework for an integrated response to the concerns of the Commission on Sustainable Development. In this regard, UNEP's Governing Council at its eighteenth session, re-emphasized the need for UNEP, in accordance with its mandate and in implementation of Agenda 21, to continue to provide effective support to the work of the Commission on Sustainable Development.[5]

22. The Governing Council also requested UNEP's Executive Director to inform the Commission on Sustainable Development of its relevant decisions. In this respect, UNEP's Governing Council, at its eighteenth session, recognized the importance of clarifying the roles of the many players in the sustainable development arena. Its decision 18/7 clarifies the mandates and practices of the Governing Council and its secretariat in relation to the mandate and practice of the Commission on Sustainable Development and the Inter-Agency Committee on Sustainable Development. It was also decided that the next session of the Governing Council would be held early in 1997 in order to allow for a substantive input to be provided by the Governing Council to the special session of the General Assembly.

23. These two sources of mandates for UNEP and many other United Nations system organizations committed to United Nations Conference on Environment and Development follow-up have contributed to the process of streamlining the organizational arrangements, and focusing and integrating the work programme, in order to be able to respond effectively to the respective yet complementary directives. Naturally, having to respond to the Commission on Sustainable Development's decisions involves substantial additional burdens on human and financial resources that have to be borne within existing means.

24. In the case of UNEP, its organizational and programmatic restructuring was reflected in budgetary directives of UNEP's Governing Council seventeenth session (May 1993), marking a significant shift of emphasis towards meeting the goals of Agenda 21. Similarly, the programme of work for 1996-1997, approved by the Governing Council at its eighteenth session, involved thoroughly reprioritizing emerging environmental issues. This trend is likely to continue in light of the proposals to be presented to UNEP's Governing Council at its nineteenth session on the work programme for 1998-1999. UNEP, like many other United Nations system organizations, is increasingly being challenged to achieve more results with less resources in the face of recent financial constraints.

3. High-level Advisory Board on Sustainable Development

25. The High-level Advisory Board on Sustainable Development, composed of eminent persons serving in their individual capacities, was established in 1993 to provide advice to the Secretary-General on sustainable development issues. It does so by examining innovative approaches to sustainable development, identifying emerging issues and formulating policy proposals for consideration by Governments and international organizations. It serves as a link between the views and concerns of major constituencies and groups, and is a means to strengthen partnerships with them and deepen their knowledge and understanding of activities within the United Nations system. As a contribution to the special session of the General Assembly, the Board's members have focused on energy, water and transport, which they consider critical future issues for sustainable development. They have identified practical policy measures, in particular relating to pricing and investment, for promoting sustainable development in those areas.

B. Regional initiatives

26. A variety of regional initiatives have grown out of the United Nations Conference on Environment and Development process. For example, all of the geographical regions have sponsored ministerial-level meetings as follow-up to the United Nations Conference on Environment and Development. These have helped to translate global issues into regional ones by identifying regional priorities for programmes to implement the United Nations Conference on Environment and Development outcomes and to raise public and political awareness. The policy directives of these ministerial conferences are generally aimed at promoting institutional development and capacity-building at the national level. As these meetings have moved from an emphasis on resources conservation to sustainable use of resources and development issues, they have attracted participation from ministries other than the environmental ones.

27. Issues of regional scope are also taken up through other means, such as regional and subregional conventions, trade agreements and joint programmes. Regional initiatives are playing a growing role in implementing certain global conventions, notably the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Montreal Protocol on Substances that Deplete the Ozone Layer, the United Nations Framework Convention on Climate Change[6] and the Convention on Wetlands of International Importance

Especially as Waterfowl Habitat (Ramsar Convention); and a regional focus is expressly contemplated under the annexes to the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa.[7] In a large geographical region like Asia, subregional cooperation has played an important role in such areas as biodiversity, climate change, coastal environment and freshwater.

28. Regional economic arrangements have rapidly encompassed new countries and new policy areas and have continued to develop after the completion of the Uruguay Round of multilateral trade negotiations. For example, the three member States of the North American Agreement on Environmental Cooperation of the North American Free Trade Agreement (NAFTA) entered into a parallel agreement and established a Commission on Environmental Cooperation. This framework provides for citizen involvement in monitoring compliance with national environmental laws and regulations.

29. All the regional commissions of the United Nations have programmes for the environment or sustainable development resulting from the various ministerial meetings mentioned above. In addition, regional offices of United Nations organizations have taken steps to strengthen their regional activities. Regional development banks, working more closely with regional bodies of the United Nations system, also increasingly promote sustainable development objectives, reflecting increasing demands for assistance in sustainable development-related areas from national Governments.

30. New forms of cooperation have emerged between the regional commissions, and the regional and country offices of other United Nations agencies and programmes and other organizations. A number of intergovernmental meetings at the regional level have adopted political statements and action plans for sustainable development. They have been convened in association with the regional commissions and other regional organizations such as the Organization of American States (OAS), the Organization of African Unity (OAU), the South Pacific Regional Environmental Programme (SPREP) and the Association of South-East Asian Nations (ASEAN).

C. Individual organizations

31. The response of individual organizations of the United Nations system to the United Nations Conference on Environment and Development's sustainable development agenda is assessed in terms of the three basic functions of intergovernmental organizations: (a) policy development, (b) the collection, synthesis, analysis and dissemination of data and information to inform action at all levels and (c) the delivery of technical and financial support to strengthen human and institutional capabilities at national and regional levels. Developments in these functional areas are reflected in, and influenced by, changes in each body's organizational arrangements.

32. Many agency programmes related to the United Nations Conference on Environment and Development goals were already emerging or evolving during the preparatory process leading up to the United Nations Conference on Environment and Development. The United Nations Conference on Environment and Development

and its follow-up have broadened the scope of existing programmes, with consequent changes in financial and human resource requirement needs and have helped to sharpen the responsibilities of the different agencies.

33. Programme adjustments have been made by all agencies, in accordance with guidance received from and the approval of their governing bodies. Criteria and standards to assess the relevance and impact of these changes need further development and amplification.

34. UNEP's post-United Nations Conference on Environment and Development restructuring has been designed to equip the organization to focus and deliver results, in an integrated manner, on the priority areas entrusted to UNEP by Agenda 21. The role and priorities of UNEP, as reflected in its organizational structure and its successive biennial work programmes since the United Nations Conference on Environment and Development, indicate a fundamental shift, largely in reaction to Agenda 21 and based on a clear assessment of needs, from a sectoral approach in respect of the environment to a fully integrated strategy, that is responsive to the agenda for sustainable development. UNEP's approach concentrates on the areas where the Programme has a comparative advantage and enhances UNEP's ability to provide comprehensive policy guidance and coordination in the field of environment, taking into account the development perspective (as mandated in Agenda 21, para. 38.21).

35. In general, policy has been the driving force for organizational and programme changes undertaken by the various organizations. In some cases, the establishment of a new policy on sustainable development has driven the decision on structural arrangements and led to the establishment of new organizational units. In other cases, the existing policies and priorities of the agencies emphasized the social, economic, environmental and cultural dimensions underlying sustainable development to a sufficient extent so that new structures were not felt to be necessary. In yet other cases, the mandates emerging from the United Nations Conference on Environment and Development had such extensive implications that the entire programme budget had to be reformulated and reoriented.

36. External and internal influences and interactions have been important in modifying the policy and programme focus of various agencies. Such influences have included the changed political and programme priorities of national Governments and the requirements of international conventions and expectations of additional funding through such funding mechanisms as the Global Environment Facility (GEF). Non-governmental organizations and major groups have increasingly emerged as a factor influencing agency priorities.

37. Just as internal agency policies set the agenda for an organization's entire programme, national policies establish a basic threshold for development activities, no matter where and by whom they are carried out. Such policies promote the dissemination of sound approaches from individual projects to the entire sector(s). The intergovernmental and governing bodies provide a forum for Governments in which to identify and agree on environmentally sound norms, procedures and practices. This is most clear in international convention processes, but is also evident in numerous examples of guidelines and practices adopted by various United Nations organizations.

38. Whatever the choice of structural arrangements, the key to organizational success has been the need to promote coordination, cooperation and an integrated approach to sustainable development. Strong political support at the highest levels of the organizations has proved to be essential for achieving a positive organization-wide response. At the same time, the intellectual base for sustainable development work is being strengthened through partnerships and networks within and outside the United Nations system and most particularly with major groups and the private sector. It is also critical that structural arrangements and the expansion and integration of expertise related to sustainable development be reinforced by corresponding financial arrangements within the organization.

D. Cooperation and coordination in the United Nations system

39. It was envisaged that implementation of Agenda 21 would require active involvement of all relevant international institutions, both within and outside the United Nations system, that are dealing with specific economic, social or environmental dimensions of sustainable development. The United Nations Conference on Environment and Development follow-up, and the work of the Commission on Sustainable Development, have mobilized commitment to the goals of sustainable development throughout the United Nations system and in numerous non-United Nations organizations worldwide. At the inter-secretariat level, this work has been led and coordinated through the Inter-Agency Committee on Sustainable Development which included broad outreach and interaction with various intergovernmental and non-governmental partners.

40. While some limitations remain, the task manager system adopted by the Inter-Agency Committee on Sustainable Development has proved to be an effective means of inter-agency cooperation and joint action. It provides a network of focal points throughout the system for the exchange of information and the preparation of Commission on Sustainable Development documentation. More detailed assessment of the functioning of the Inter-Agency Committee on Sustainable Development is found in the Administrative Committee on Coordination (ACC) statement to the 1997 special session of the General Assembly on the subject, which is also being made available to the Commission on Sustainable Development at its fifth session.

41. UNEP performs its coordination role at the policy level through the Inter-Agency Environment Coordination Group (IAEG), of which all relevant United Nations agencies and programmes are members. An important initiative currently taking place within IAEG is the development of a "United Nations system-wide strategy in the field of the environment".

42. Cooperation and partnerships have expanded in scope, involving not only other United Nations agencies and convention secretariats but new partners outside the United Nations system, such as bilateral donors and various major groups, including the private sector. The scientific centres of excellence in developing countries promoted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Third World Academy of Science (TWAS) are an example of this.

43. At the country level, the UNDP resident representative/United Nations resident coordinator has, in some cases, organized sectoral or thematic coordination forums with the participation of United Nations organizations and bilateral donor agencies in such areas as agriculture, environment, forestry, water supply, poverty alleviation and gender and development. In other cases, the World Bank has played a role in coordinating donor meetings.

44. It is recognized, however, that the responsibility for coordinating external assistance, from multilateral, bilateral or other international organizations, rests first and foremost with the Government concerned. Governments are increasingly focusing on developing or strengthening their own capacity to coordinate the collaboration with external partners.

III. UNFULFILLED EXPECTATIONS

A. Enhancing the role and functioning of the United Nations system

45. The financial resources available to support Agenda 21 and the United Nations Conference on Environment and Development follow-up activities have not reached the level anticipated during the United Nations Conference on Environment and Development preparatory process. The declining levels of official development assistance (ODA) have adversely impacted on multilateral programme delivery within the United Nations system. United Nations organizations have faced successive years of zero growth or generally reduced regular budgets, from which activities formulated in direct response to Agenda 21 would be funded. At the same time, extrabudgetary resources have increased, in relation to regular budgets, to meet the steadily and substantially increased programme demands required for United Nations Conference on Environment and Development follow-up. While the sources of such extrabudgetary funds have been limited to relatively few countries so far, it would be important for more countries to support specific follow-up activities in the future.

46. Discrepancies or inconsistencies may increasingly exist between priorities identified by various intergovernmental bodies including the Commission on Sustainable Development and between these priorities and the funds made available in the regular budgets of United Nations organizations. In providing extrabudgetary support, donor Governments may need to consider more carefully the mandates established by the governing bodies of the United Nations organizations concerned.

47. While sources of funding should be diversified to the extent possible, innovative schemes for raising available funds need to be considered further. Underfunding of certain priority programmes is due less to weak internal mechanisms than to the failure to attract outside resources in an effective way. Notwithstanding the importance of the overall level of funding, the ways in which funds are used are equally important. There is thus a need to devise better funding strategies both at global and at local levels.

48. With regard to GEF, capacities available within the United Nations system should be better taken into account and fully drawn upon in future GEF work related to project identification and implementation.

B. Cooperation and coordination in the United Nations system

49. The potential of the task manager system to foster joint implementation and sharing of resources within the system needs to be substantially developed. Consideration needs to be given to whether a task manager-type approach would be useful among United Nations system organizations represented at regional level.

50. Further work is needed on country-level programming and coordination among the organizations of the United Nations system as well as bilateral and multilateral programmes, where this is possible, recognizing the central role of national Governments in this regard, particularly ministries of finance and planning.

51. A single planning framework at country level could have a positive impact on programming coordinated support to national Governments by the United Nations system, including the Bretton Woods institutions.

IV. EMERGING PRIORITIES

A. Strengthening institutional capabilities and arrangements

52. Affirmation of the economic, social, environmental and cultural principles inherent in the concept of sustainable development would be enhanced by more systematic consideration of the follow-up to the United Nations Conference on Environment and Development and related major United Nations conferences. Further effort is required by the United Nations system to integrate the results of the various United Nations conferences into their policies and programmes, including at the intergovernmental level. The results of major United Nations conferences related to sustainable development should be treated in an integrated manner in the deliberations of the Commission on Sustainable Development, which should also consider how to improve support for integrated follow-up at regional and national levels. Further streamlining and adjustments may be appropriate to avoid duplication of functions within the structure of the Economic and Social Council.

53. Given the increased number of decision-making bodies concerned with sustainable development, including those related to the international conventions, there is an ever-greater need for coordination at the intergovernmental level through consistent and coherent positions of Governments in these various forums, as well as for the development and strengthening of a collaborative process among secretariats. This could facilitate highlighting specific policy and programme relationships as initiatives are developed in international institutions and convention processes at global and regional levels. It would be helpful to Governments and others concerned if the cooperating secretariats could clearly indicate interactions and synergies among agency and convention initiatives in relation to data and information, policy

formulation and operational programmes, as well as identify regional and sectoral implications.

B. Enhancing the role and functioning of the United Nations system

54. The collective view of the secretariats of the organizations of the United Nations system is that the concept of sustainable development should continue to provide an 'overarching' policy framework for the entire spectrum of United Nations activities in the economic, social and environmental fields at global, regional and national levels. Further work on sustainable development should not be confined to review of the implementation of Agenda 21 and to the work of the Commission on Sustainable Development and the Inter-Agency Committee on Sustainable Development. All intergovernmental and inter-agency bodies and processes need to contribute, within their mandates and areas of competence, to further progress in achieving the goals of sustainable development through concrete action and programmes, not only at the global level but also at the regional and country levels. Full account must also be taken of the overall framework for cooperation agreed by the international community in the context of the coordinated follow-up to all recent United Nations conferences, since all have made an important contribution to specific aspects of the global sustainable development agenda.

55. These considerations, however, should not lead to the conclusion that, in future, intergovernmental deliberation on all issues relevant to sustainable development should take place in, or under the guidance of, the Commission on Sustainable Development. The challenge in the future is to ensure that all relevant policy-making, and activities of governing and expert bodies, work towards achieving the goals of sustainable development, as well as to ensure continuing political commitment in this regard. Only in this way can the United Nations system play the support role envisaged for it in Agenda 21. Such work, under the overall guidance and coordination of the General Assembly and the Economic and Social Council, should be consistent and mutually reinforcing, promoting further action and cooperation to implement specific programmatic areas of Agenda 21.

56. The overall institutional framework for the implementation of Agenda 21, as outlined in chapter 38, would seem to be fully relevant for the period after the 1997 review. However, the General Assembly at its special session may wish to consider how this framework could best be deployed in the future, taking into account the experience gained in the period 1992-1997, and the substantive results achieved since Rio, as well as recent decisions taken by the Assembly and the Economic and Social Council in the context of ongoing restructuring of the United Nations and of the follow-up to other international conferences. In particular, it would seem essential to ensure that further work aimed at the implementation of Agenda 21 provides for an integrated and coordinated approach to the implementation of the outcomes of the other global conferences that took place after Rio and that are highly relevant to the achievement of sustainable development.

57. It would be essential for the General Assembly at its special session to take into account the considerations outlined above for elaborating its decisions and recommendations regarding the specific roles to be played in the period after the 1997 review by various bodies, programmes and organizations of the United Nations system.

58. It would seem that in the future the Commission on Sustainable Development, in discharging its functions as outlined in General Assembly resolution 47/191, should focus on those areas where it has comparative strength. It provides a forum for periodic review of the overall progress in the implementation of Agenda 21; for policy debate and consensus-building on sustainable development issues; and for strengthening partnerships for sustainable development, including with major groups. In other areas, such as coordination of implementation at the national level or sectoral assessments, the Commission could limit itself to maintaining and strengthening communication/interaction with other actors involved in Agenda 21 implementation. The aim would be to advise the Economic and Social Council and the General Assembly on the promotion of coherent actions and provide general policy guidance. Specific proposals on the possible programme of work of the Commission on Sustainable Development after 1997 are contained in document E/CN.17/1997/2.

59. Regarding the other bodies, programmes and organizations of the United Nations system, including financial institutions, their future role in the implementation of Agenda 21, it seems, should be twofold:

- The main focus of their activities should be the coordinated implementation of specific programmes and activities emanating from Agenda 21, conventions relevant to sustainable development, and the decisions taken and the instruments established after the United Nations Conference on Environment and Development by the Commission on Sustainable Development and other bodies and conferences (for example, the Intergovernmental Forum on Chemical Safety, the Washington Global Programme of Action for the Protection of the Marine Environment from Land-based Activities,[8] the Habitat Agenda,[9] and so forth). Priority here should be given to achieving synergy, promoting joint programming and supporting implementation at national level;

- They should continue to support sustainable development debate in the Commission on Sustainable Development by providing the Commission with expert advice and policy proposals on specific aspects of sustainable development (for example, UNEP: environment; the World Health Organization (WHO): health; the International Labour Organization (ILO): employment and sustainable livelihoods; the United Nations Centre for Human Settlements (Habitat): human settlements; the United Nations Conference on Trade and Development (UNCTAD): economic growth and trade; FAO: food and agriculture, and so on). Such advice would be provided through their governing and policy-making bodies as well as through their secretariats (task managers).

60. The main challenge is to ensure that policy decisions and recommendations on sustainable development adopted at international level (in other words, through the Commission on Sustainable Development) are translated into specific

programmes and projects carried out in relevant sectors/areas by agencies and organizations, and into concrete actions at the field level. At the same time, it would be important to ensure that policy discussion on sustainable development will benefit from practical experiences gained through international cooperation at the country and regional levels, as well as in specific sectoral programmes. Two principal conditions would seem essential to achieving this goal:

(a) Improved policy coordination within national Governments in order to provide:

- Greater coherence in the positions taken by member countries in the various governing and other policy-making bodies within the United Nations system, as well as in the decisions taken by these bodies, including the governing bodies of financial institutions;

- More effective allocation of resources in accordance with agreed priorities;

(b) Further enhancement of intersectoral cooperation through ACC's Inter-Agency Committee on Sustainable Development and its system of task managers, in particular with a view to strengthening the linkages between top-down policy decisions taken at the global level and bottom-up priority-setting at country and regional levels.

61. There is a need for a more effective and mutually supportive link between global policy discussion, national/regional needs and realities, and United Nations system support to implementation at the national and regional levels. More specifically, it is essential to ensure that policy decisions and recommendations on sustainable development adopted at the international level are translated into specific programmes and projects carried out in relevant sectors/areas by agencies and organizations, and into concrete actions at the field level. At the same time, policy discussions on sustainable development could benefit from practical experiences gained through international cooperation at the country and regional levels, as well as in specific sectoral programmes.

62. Negotiations are planned during 1997 for a new replenishment of the GEF. These negotiations will have special importance for the future work of the GEF, as well as a direct impact on the availability of new and additional grant and concessional funding for sustainable development with global benefits at the global, regional and national level.

C. Regional cooperation

63. There is a need to strengthen intergovernmental processes that give concrete expression and focus to the goals and strategies of Agenda 21 at the regional level, in relation to policies, information resources and operational planning. The Commission on Sustainable Development should remain aware of sustainable development issues of a regional character to ensure that such issues are reviewed at the global level, taking into account the importance of

regional and subregional cooperation and implementation in Agenda 21 and the role different actors can play at the regional level. There is a need to establish and strengthen direct linkages between the work of the Commission on Sustainable Development and various regional initiatives and programmes.

64. There is increasing emphasis on the regional implementation of multilateral environmental agreements and conventions, as well as on more detailed regional implementing instruments. Convention secretariats and United Nations agencies are increasingly called upon to assist Governments at the regional level in preparing for convention-related meetings and implementing the results. Activities include assistance in the preparation of regional agreements, and work on protocols and amendments, modalities and methodologies for implementation and in the interpretation of the impacts and compatibility among various agreements. It may also be necessary to designate appropriate agencies with the required capacity and expertise to facilitate the negotiation of regional sustainable development agreements.

65. The importance of a regional focus for sustainable development is increasingly recognized and intersectoral cooperation among regional organizations and international organizations operating at the regional level is under way. The growing number of regional organizations requires a clear division of labour and a better use of existing regional cooperation mechanisms.

66. Institutional arrangements need to be strengthened to ensure effective consultations and coordination between the headquarters and regional organs of the system, both at regional and at country levels. Such arrangements help devolve implementation actions related to Agenda 21 from the global to the regional level, as stressed by the Commission on Sustainable Development at its fourth session. The follow-up to the United Nations Conference on Environment and Development calls for interaction and partnerships among a wide range of regional entities within and outside the United Nations system, as part of such arrangements. This should include closer cooperation and coherence with respect to the work of different regional intergovernmental bodies and their secretariats.

Notes

[1] Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

[2] See United Nations Environment Programme, Convention on Biological Diversity (Environmental Law and Institutions Programme Activity Centre), June 1992.

[3] Official Records of the Economic and Social Council, 1993, Supplement No. 5 (E/1993/25/Rev.1), part two, chap. I, sect. A, annex.

[4] Report of the Global Conference on the Sustainable Development of Small Island Developing States, Bridgetown, 25 April-6 May 1994 (United Nations publication, Sales No. E.94.I.18 and corrigenda), chap. I, resolution 1, annex II.

[5] See Official Records of the General Assembly, Fiftieth Session, Supplement No. 25 (A/50/25), annex, decision 18/7, para. 3.

[6] A/AC.237/18 (Part II)/Add.1 and Corr.1, annex I.

[7] A/49/84/Add.2, annex, appendix II.

[8] Report of the Intergovernmental Conference to Adopt a Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (A/51/116, annex I), appendix II.

[9] Report of the United Nations Conference on Human Settlements (Habitat II), Istanbul, 3-14 June 1996 (A/CONF.165/14), chap. I, resolution 1, annex II.

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Overall progress achieved since the United Nations Conference on Environment and Development

Report of the Secretary-General

Addendum

International legal instruments and mechanisms*

(Chapter 39 of Agenda 21)

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* The present report was prepared by the Department for Policy Coordination and Sustainable Development (DPCSD) as task manager for chapter 39 of Agenda 21, in accordance with arrangements agreed to by the Inter-Agency Committee on Sustainable Development (IACSD). It is the result of consultation and information exchange between United Nations agencies, international and national organizations, interested government agencies and a range of other institutions, individuals and major group representatives.

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INTRODUCTION

1. The present report reviews progress made in the implementation of the objectives set out in chapter 39 of Agenda 21 (International legal instruments and mechanisms),[1] taking into account the decisions taken by the Commission on Sustainable Development on this subject in 1994 and 1996 at its second and fourth sessions respectively. The report focuses on three main developments related to international legal instruments and mechanisms, which represent important areas in international law for sustainable development, subsequent to the United Nations Conference on Environment and Development in 1992. A separate report (see document E/CN.17/1997/8) is provided on the application and implementation of the principles of the Rio Declaration on Environment and Development.[2]

I. SELECTING KEY OBJECTIVES

2. Three key objectives are addressed below: the first is the development of international law for sustainable development through, inter alia, treaty-making, in particular on a universal basis (chap. 39, paras. 1 (a) and (f), 2, 3 (b) and 5); the second is the recognition of the special situation of developing countries, through, inter alia, effective participation in negotiation of international sustainable development instruments, capacity-building and financial assistance (chap. 39, paras. 1 (c) and (d), 3 (a), (c) and (e) and 9); and the third is coordination and cooperation in the implementation of international agreements in the field of sustainable development, including cooperation among the secretariats of relevant conventions, within the context of procedures allowed by their respective conferences of the parties (chap. 39, paras. 1 (b) and 3 (d), (f) and (g)).

II. REPORTING ON AND ANALYSING SUCCESSES

Development of international law for sustainable development

3. Since the concept of sustainable development was promoted by the 1987 Brundtland report,[3] and later elaborated in Agenda 21 and the Rio Declaration, a number of attempts have been made to understand its meaning in the context of international law. There is a growing recognition that integration and interrelation are at the heart of sustainable development. They constitute the underlying theme of the Rio Declaration and Agenda 21, and consequently of the development of international law for sustainable development. Together they reflect the interdependence of social, economic, environmental, institutional and human rights issues that define sustainable development. The notion of integration implied in international law on sustainable development law may lead to the introduction of conceptual coherence into the more traditional, segregated fields of international law; at the same time, the concepts and requirements of sustainable development may also have an influence on and transform these fields. The concept of sustainable development has the potential to set the framework for harmonized, coherent national measures and actions. International law for sustainable development may also contribute to

greater coherence and complementarity between international and national law, policies and action (see box 1).

Box 1. Ramsar and World Heritage Conventions

An example of the development of international law for sustainable development is the progress in the context of the Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat. The Convention, which entered into force in 1975, originally focused exclusively on preserving wetlands as waterfowl habitats, but has developed extensively over time to acknowledge the importance of wetlands for their biodiversity and their other ecological and environmental functions. It is recognized that for a successful implementation of the Ramsar Convention the simultaneous imperatives of economic development and environmental protection need to be reconciled. States need to be made aware of the importance of wetlands preservation and about new ways to allow development to proceed without destroying wetlands in the process.

Another illustration is provided by the World Heritage Convention (Convention for the Protection of the World Cultural and Natural Heritage), which notes not only that "the cultural heritage and the natural heritage are increasingly threatened with destruction" but also that this heritage is a shared heritage of humankind. The World Heritage Fund provides one mechanism to protect sites of outstanding universal value recognizing the special situation of developing countries. In recent years, the implementation of the Convention has shown the recognition of indigenous populations and traditional land-use systems, mainly through the inclusion of cultural landscapes in the World Heritage List.

4. Since the United Nations Conference on Environment and Development, some key international agreements in the field of sustainable development have entered into force, and new instruments have been negotiated, on both regional and global scales. They attempt to integrate environmental and developmental issues as opposed to undertaking more traditional sectoral approaches. There are also agreements that, while focused on other areas, such as trade, take aspects of sustainable development into account (see box 2). Furthermore, a large number of international legal instruments have undergone such changes in status as stem from new signatories, new ratifications, new parties, new protocols, amendments and relevant decisions of their conference of the parties.

5. The two treaties opened for signature at the United Nations Conference on Environment and Development, the Convention on Biological Diversity[4] and the United Nations Framework Convention on Climate Change,[5] both entered into force with unprecedented speed and wide acceptance. The United Nations Convention on Biological Diversity was adopted on 5 June 1992, and entered into force on 29 December 1993. As of mid-December 1996, there were 165 parties to the Convention. The United Nations Framework Convention on Climate Change was adopted on 9 May 1992, and entered into force on 21 March 1994. As of mid-December 1996, there were 164 parties to the Convention. They both endorse

and elaborate on the concept of sustainable development, by explicitly including notions of equity, common concern of humankind, and common but differentiated responsibilities, among others. Their substantive elements embody obligations related, inter alia, to burden-sharing, financing, transfer of technology and concerted strategies, which give concrete application to the concept of sustainable development.

Box 2. Convention on Nuclear Safety and North American Free Trade Agreement (NAFTA)

Paragraph 7 of chapter 39 of Agenda 21 calls for ongoing efforts to be made to conclude the ongoing negotiations for a nuclear safety convention in the framework of the International Atomic Energy Agency. The Convention on Nuclear Safety was opened for signature on 20 September 1994, and entered into force on 24 October 1996. It is the first legal instrument that directly addresses the issue of the safety of nuclear power plants worldwide. It foresees, among other things, the submission of safety reports by the States concerned which will be examined at peer review meetings to be held at regular intervals.

The North American Free Trade Agreement (NAFTA) and its two side agreements on the environment and labour (the North American Agreement on Environmental Cooperation and the North American Agreement on Labor Cooperation), are an example of a regional instrument that seeks to integrate social and economic components.

6. In addition to binding instruments or mechanisms, customary law and acts of international organizations are important for the development of international law for sustainable development. Also new covenants, international standards, codes of conduct and guidelines related to sustainable development have been promoted that also reflect the trend towards integration of environment and development concerns (see box 3). The importance of the involvement of international financial institutions and business and industry in this area is being increasingly recognized.

Box 3. Code of Ethics on the International Trade in Chemicals

The development of the international Code of Ethics on the International Trade in Chemicals: Principles and Guidance for Industry and Other Private Sector Parties to Enhance Chemical Safety (Nairobi, UNEP, 1994), as initiated by the United Nations Environment Programme (UNEP), which includes principles and guidance for industry and other private sector parties with respect to enhancing chemical safety, is an indication of the growing awareness by the private sector of the need to voluntarily adhere to and promote international standards for the protection of the environment.

III. PROMISING CHANGES AND DEVELOPMENTS

Development of international law for sustainable development

7. Increasing attention has been paid to the identification and elaboration of concepts and principles in international law related to sustainable development, based on the principles of the Rio Declaration. This could have practical consequences, for example, in facilitating and stimulating the development of new legal instruments, as well as in the implementation, interpretation and harmonization of existing instruments. Increasingly, the principles of the Rio Declaration are being reflected in national laws as well.

8. Another example of a promising change in the development of international law for sustainable development is the increased awareness of the need for effectiveness, as illustrated by the growing interest in issues of implementation, compliance, dispute avoidance and dispute settlement (see box 4). Chapter 39, paragraph 10, of Agenda 21 calls for the further study of dispute avoidance and settlement methods. The various initiatives undertaken in this field, in particular aiming at dispute avoidance procedures and mechanisms including arbitration, and at the development of transparent and non-confrontational multilateral consultative procedures, are under discussion in multiple international forums.

Box 4. United Nations Framework Convention on Climate Change

Recent treaties provide parties with a range of options for encouraging implementation and settling of disputes. The United Nations Framework Convention on Climate Change relies on a Subsidiary Body for Implementation to assist Parties in the effective implementation of the Convention, and it envisages the settlement of disputes through negotiation or any other peaceful means chosen by the Parties, submission to the International Court of Justice, arbitration or conciliation. The establishment of a multilateral consultative process is also under current consideration. Its exact form, content and nature will be known at a later stage.

Recognition of the special situation of developing countries

9. Principle 6 of the Rio Declaration states that priority shall be given to the special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable. This idea is also incorporated in a wide variety of international legal instruments, especially in those negotiated during or after the United Nations Conference on Environment and Development. It reflects the interdependence among countries in striving for sustainable development.

10. The category of States with economies in transition emerged in the international agenda when the preparatory work of the United Nations Conference on Environment and Development had already started. However, during the United Nations Conference on Environment and Development, the specific environmental

and economic problems of those countries were recognized, and afterwards some legal instruments included special provisions for countries with economies in transition.

11. States with economies in transition are actively participating in the development and implementation of regional conventions and related protocols in the field of air pollution, water management, industrial accidents, environmental impact assessment and public participation. These instruments, administered by the Economic Commission for Europe (ECE), are playing an important role in integrating these countries into a pan-European legal and economic space.

12. Most recent international legal instruments and mechanisms in the field of sustainable development take into account the specific situation of developing countries and their differentiated responsibilities (see box 5). They support the need for assistance, including, for example, funding for participation in the negotiation of international legal instruments and for participation in meetings of treaty bodies after signing and ratification. These treaties often provide for technology transfer and cooperation, financial resources and the creation or designation of a financial mechanism for implementation of the treaty. Also, developing countries in some cases receive financial assistance to participate in meetings and workshops related to international legal instruments and mechanisms, organized by, inter alia, international organizations, Governments and non-governmental organizations.

13. Additional means for recognizing the special situation of developing countries involve, for example, adjusted time schedules for implementation. New techniques have been developed, for example, the provision of "compensatory" finance to be made available to developing countries to enable them to meet certain incremental costs of implementing their obligations. This, in turn, has led to the creation of new funding arrangements at existing institutions, such as the Global Environment Facility.

Coordination and cooperation in the implementation of international agreements in the field of sustainable development

14. Two types of coordination among conventions related to sustainable development can be distinguished. One type encompasses coordination at the administrative level, which will be discussed in the section on unfulfilled expectations; the other, coordination of substantive issues (discussed below).

15. There has been an increasing proliferation of global, regional and bilateral environmental treaties in the last decade. Other areas of law, such as human rights, labour and trade law, have also experienced an expansion of international legal instruments. The objectives of many of these instruments are related and, in some cases, interdependent or overlapping, within the overall context of sustainable development. The same is true of the activities required for their respective implementations. The trend towards coordination of some of the substantive issues, such as chemicals and biodiversity, should encourage an approach that is more consistent, effective and efficient. Cooperation among the secretariats of relevant conventions should subsist within

the context of procedures allowed by their respective conferences of the parties (see box 6).

Box 5. Common but differentiated responsibilities: Convention on Biological Diversity, United Nations Framework Convention on Climate Change, and 1995 Fish Stocks Agreement

The concept of common but differentiated responsibilities is embodied, for example, in the Convention on Biological Diversity, which makes the implementation of obligations undertaken by developing countries dependent on the effective implementation by developed countries of their commitments to providing new and additional financial resources, as well as to providing access to and transfer of technology on fair and the most favourable terms.

The idea of common but differentiated responsibilities, and respective capabilities, is set forth in article 3, principle 1, of the United Nations Framework Convention on Climate Change to guide the Parties in the implementation of the Climate Change Convention. The Convention recognizes the special circumstances and needs of developing countries, and then structures the duties and obligations to be undertaken by the States Parties accordingly.

Another example of these concepts is found in the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (document A/50/550, annex I). Its part VII deals with the requirements of developing States in relation to conservation and management of the fish stocks concerned, and elaborates upon the purposes of cooperation and the forms it shall take, such as joint venture arrangements. The Agreement envisages the establishment of special funds to assist developing States in its implementation.

Box 6. Coordination among conventions

One of the original purposes of the Convention on Biological Diversity was to make sense of the myriad of international agreements on biological conservation created in the past two decades. At the second meeting of the Conference of the Parties to the Convention (1995), the Conference of the Parties requested the Executive Secretary of the secretariat of the Convention to enter into collaborative arrangements with other biodiversity-related secretariats, with a view to examining the ways in which other conventions could help in realizing the objectives of the Convention on Biological Diversity (see document A/51/312, annex, annex II, decision II/13). Such arrangements, once concluded, could also help in reinforcing institutional cooperation between biodiversity-related organizations.

In 1996, the Executive Secretary of the Convention on Biological Diversity signed a Memorandum of Cooperation with the secretariats of the Ramsar Convention, the Convention on the Conservation of Migratory Species of Wild Animals and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Another example of the recognition of the need for coordination can be found in the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, which was adopted in June 1994. The Convention emphasizes the need for integrated cross-sectoral responses to the problem of land degradation. Its article 8 refers to the need for coordination with other conventions, in particular the conventions on biodiversity and climate change.

IV. UNFULFILLED EXPECTATIONS

Development of international law for sustainable development

16. The development of international law for sustainable development has been furthered by the negotiation of new integrative instruments, and the adoption and implementation of others. On the national level, implementation of international treaties in the field of sustainable development through national legislation remains piecemeal. Integrative and participatory strategies need to be further developed. The lack of secure, sustained and predictable financial resources, insufficient institutional capacity and human resources and inadequate access to technologies may hinder implementation and compliance with international legal instruments. It is also perceived that the unprecedented rate at which new international legal instruments are being adopted exceeds capacity (of, in particular, some developing countries) to implement these instruments.

17. Complete compliance with international treaties on sustainable development has not been attained. Factors contributing to this deficiency include lack of political will, unavailability of sufficient financial means, lack of full understanding of the exact obligations of the instrument, and the compressed time schedule of many negotiations, which may leave room for multiple

interpretations of the agreed text, and this may give rise to potential disputes. In these respects, it would be advisable if national compliance plans containing specific and measurable benchmarks were developed at the time of ratification, which would include the need for financial or technical assistance.

18. It may be only after an instrument has been negotiated and signed that the full range of consequences, including the need for financial and technical resources, emerges. The obstacles to compliance are not always taken fully into account from the beginning of the negotiating process.

19. Another constraint resulting in inadequate use of funds may arise from the lack of coordination at the national level of States, among developed as well as developing countries, between the national and the local level, and among ministries themselves. Clashing competencies, indistinct responsibilities and vagueness about the source, goal and amount of financial obligations may hamper implementation and compliance.

Recognition of the special situation of developing countries

20. Financial and technical support has furthered the participation of developing countries in negotiation and implementation of international agreements, but the support is insufficient for the task, particularly in view of the complexity of integrative instruments which demand greater expertise in a wide range of areas. Although assistance in capacity-building takes place, there is a great need for more support.

21. The funds available for assistance are sometimes considered to be insufficient, and exploration of additional sources of financial resources is encouraged, including mobilization of private sector financing. Availability of new funds or adequate replenishment of existing funds is a serious matter of concern. For example, the Economic and Social Commission for Asia and the Pacific and the Economic and Social Commission for Western Asia both reported that several countries in their region expressed strong concerns regarding their problems in the implementation of and compliance with conventions due to the administrative burden imposed, and the lack of institutional and technical capacities and financial resources.

Coordination and cooperation in the implementation of international agreements

22. The Commission on Sustainable Development, at its second session, noted the need for coordination and more efficient structural arrangements among the secretariats of conventions related to sustainable development. At its fourth session, the Commission on Sustainable Development recognized the need for consolidation and integration of procedures, and for cooperation among the secretariats of different conventions to this end.

23. UNEP and ECE have each been successful in strengthening coordination among the conventions that they administer. Overall, however, the initial trend towards administrative coordination of international agreements in the field of sustainable development has not materialized; some convention secretariats, once housed under one roof, are now being dispersed to different countries and

continents as a result of political decisions taken by the respective conferences of the parties. Other reasons why such coordination and cooperation have not fully developed are traceable, inter alia, to the specific goals of various conventions, their different membership, the fact that representatives of diverse ministries or other bodies of individual countries participate in the activities of the conventions, and the fact that secretariats are administered by different institutions.

24. Harmonizing or streamlining of reporting requirements under the various conventions is considered a priority by many States. Implementation of activities undertaken under the various conventions needs to be mutually supportive, and unnecessary duplication of activities needs to be avoided, while coordination could be enhanced among the respective programmes of work. Subjects such as intellectual property rights, fisheries, trade in chemicals and wastes, and financial arrangements, among others, are approached with a different focus in more than one international legal instrument, and require further cooperation and coordination.

V. TRENDS AND EMERGING PRIORITIES

25. There is a growing recognition of the importance of participation and involvement of non-governmental organizations, other non-State actors and the public at large (see box 7). They bring matters of concern to the attention of national policy makers; they mobilize and inform the public; they set new and challenging issues in the international agenda. An important issue that needs to be addressed during the preparatory stages of every international conference is the relationship between States and non-governmental organizations. Non-governmental organizations and State representatives have been able to meet to discuss, and to reach a basic understanding on, common concerns and approaches. The follow-up to such understandings includes policies set at State level, and it is regarded as more and more important for non-State actors, including local communities, to be closely involved in compliance and implementation at the national level. International financial institutions constitute another example of significant participation: they may offer States incentives to comply with agreements and they are in a position to require compliance as a condition of assistance. They can help build capacity and engage communities in implementing agreements.

Box 7. Ramsar Convention Strategic Plan

The meeting of the Contracting Parties to the Ramsar Convention, held in March 1996, adopted a comprehensive Strategic Plan, 1997-2002, which has two main purposes: to encourage implementation of the treaty and its multitude of guidelines which have been adopted over the years, and to involve as many actors as possible in its implementation, varying from government personnel to non-governmental organizations and local communities.

26. Non-State actors have become present and manifest in the intergovernmental policy-making process. For example, contributions from the scientific community on the natural linkages within ecosystems and between environment and economic activity have pushed such major issues as the ozone layer, climate change and biodiversity into the international legal agenda.

27. The possibility that non-State actors could help fulfil treaty obligations is not being tapped. Other non-State actors, including especially industry, and non-profit and non-governmental organizations, have an increasing stake in the sustainable development dialogue and are able to bring matters of concern to the attention of international and national policy makers, and to mobilize and inform the public and the scientific community. Intergovernmental organizations and local authorities, among others, have an important function in implementing international agreements and are positioning themselves to play a more active role in negotiating processes. ECE has been entrusted with drafting a convention on access to environmental information and public participation in environmental decision-making.

28. There has been a change of emphasis from the development of new international legal instruments to the effective implementation of and compliance with existing agreements. With the increase in international legal instruments related to sustainable development during the past few years, there is concern that the capacity of countries to implement and comply with all of those to which they are a party has not kept pace with commitments. There is a related trend discernable towards non-binding instruments, such as codes and guidelines, for example, the International Organization for Standardization (ISO) 14000 standards.

29. Related to this is the changing role of the secretariats of international legal instruments. Implementation and progress in compliance could be enhanced by closer cooperation with implementing States. It might be useful for secretariats to focus efforts on maintaining and enhancing the support of such States.

30. The growing awareness of global interdependence in many aspects includes the perception that international law has to redirect itself towards integration and interaction among its various branches. For instance, interaction between various branches of international law, such as environmental law and trade law, and trade and labour standards, as well as environmental law and human rights, can be viewed as an emerging priority. There is an increasing recourse to economic instruments and other incentives to expand participation in and enhance compliance with relevant legal instruments; continuing attempts to harmonize environmental and trade regimes; and proliferation of differentiated responsibilities. An integrated intergenerational equity approach should constitute an underlying part of any sustainable development strategy in international law, so as to promote the concept of continuity and one world as opposed to notions of national interests, negotiations and borders.

31. Environmentally-oriented international legal instruments rely increasingly on scientific findings. Various international legal instruments have set up scientific and/or technical bodies. They have been challenged to draw upon the work of the wider scientific community, including other intergovernmental forums, and to have their expertise so integrated as to guide the policy of their respective convention bodies.

Notes

[1] Report of the United Nations Conference on Environment and Development, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

[2] Ibid., annex I.

[3] World Commission on Environment and Development, Our Common Future (Oxford and New York, Oxford University Press, 1987).

[4] See United Nations Environment Programme, Convention on Biological Diversity (Environmental Law and Institutions Programmes Activity Centre), June 1992.

[5] A/AC.237/18 (Part II)/Add.1 and Corr.1, annex I.